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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Story of the Week
You Can Make Money on Trade-Ins
Let's Get Out of the Junk Business
Go for Younger Models
Newlyweds Are Your First Market
Dealer Associations?
Dealing Positively with Trade-Ins

Story of the Week

Unhappily and dubiously Joe took his wife to the Chez Paree in Chicago. He protested that he hated night clubs, and hadn't been in this one for 10 years because it was so expensive.

When they arrived, the doorman shouted, "Hi, Joe. New girl, huh?"

Safely inside, the checkroom girl chirped, "How's tricks, Joe, old chum?"

Joe told his wife that they had mistaken him for someone else.

Head waiter bowed low and said, "Welcome again, Joe. Your regular table awaits you."

Waitress patted Joe's hand and whispered, "How are you, Joe?" Cigarette girl voluntarily opened a pack of cigarettes, and placed them on the table with, "Your favorite brand, Joe."

On came the floor show.

"Hi, Joe," called out a chorus girl. "See you later, as usual."

Wifey was fit to be tied, and wanted to leave at once. Inside the cab she berated him, beat him, hollered. . . .

Taxi driver heard the tirade and was sympathetic. Pulling up to the curb he stopped, turned his head toward the back seat, and advised:

"Don't put up with that, Joe. Pitch her out and we'll go get Mabel."

You Can Make Money on Trade-Ins

This seems difficult to believe, but it is attested to by affidavits. Lawrence D. Sullivan, owner of the Sullivan Maytag Co., 23 Market, Fort Scott, Kansas, received an unsigned letter in which were enclosed two 20-dollar bills, a $10 bill, and this message:

"Kindly give the enclosed 50 dollars to the company that manufactures the Kelvinator refrigerator, or keep it yourself. Some time ago a salesman for the company gave me a very liberal trade-in allowance on my old box. It was an honest transaction and I accepted the allowance. Since then, however, I have felt that my old box

(Concluded on Page 14, Col. 1)

Frigidaire Central Home Unit Installs Through-the-Wall

DAYTON—A new experimental central home air conditioner which installs through the wall of a house as "easily and inexpensively" as a room unit has been developed by the engineering department of Frigidaire Div., General Motors Corp.

Announcement of the new year-round system was made by H. F. Lehman, GM vice president and head of the division here, who declared that "the development is an indication of the increased emphasis Frigidaire is putting on its home air conditioning program."

The new system consists of a gas furnace and a factory-built and sealed air-cooled condensing unit - cooling coil package. The cooling equipment inserts

(Concluded on Page 4, Col. 1)

2-Section Heat Pump Offered by York-Shipley

YORK, Pa.—Details regarding its new Shipley "Magi-Temp" heat pump have been announced by York-Shipley, Inc. here.

The Magi-Temp comes in two sections, to be installed inside and outside the home. It is offered in three models, each equipped with automatic defrosting.

During the cooler months, the reverse-flow system will pump in heat from the outdoor air. Should the outside temperature drop below the practical limits of the heat pump, auxiliary electric heaters will cut in automatically.

The auxiliary heater sections are controlled by a two-stage thermostat, which cuts in one or both heater sections, and a duct thermostat, which operates when the outdoor temperature falls to low for the heat pump

(Concluded on Back Page, Col. 1)

To Develop Joint Frozen Food Code

WASHINGTON, D. C. — The task of developing a model code to provide standards for the protection and handling of frozen foods has been undertaken jointly by the Association of Food and Drug Officials of the United States and the National Association of Frozen Food Packers, it was reported here recently.

At its convention in Louisville in May, the food and drug officials named a five-man subcommittee to work with the packers on the project.

First goals of the subcommittee are to determine practical microbial levels for prepared frozen foods and to standardize methods for measuring microbacteria.

Now They Air Condition . . .

Race Tracks . . . Drive Ins

CHICAGO — Three widely-known race tracks are blossoming forth with air conditioned grandstands this summer.

Washington Park, in Homewood, Ill., has already opened its season with all interiors of the stands, stretching for nearly a quarter mile, glass-enclosed for air conditioning and heating. The clubhouse interior was glass enclosed and air conditioned and heated last year.

Arlington Park in northwest Chicago opens June 17 with 350,000 sq. ft. of air conditioned grandstand and clubhouse.

Roosevelt Raceway harness track in Westbury, Long Island, N. Y., will open its 105-night meet this summer with an air conditioned, glassed-in upper

(Concluded on Page 33, Col. 2)

SYRACUSE, N. Y.—A unique Las Vegas drive-in restaurant has brought air conditioning "one more step toward universal use" by filling the cars parked outside with a constant supply of cool, clean dehumidified air along with the French fries, it was revealed by Carrier Corp. here.

"Car-hops" at the Blue Onion restaurant hook an air conditioning outlet at the end of a long flexible rubber conduit through the window of a car and up against the ceiling before they even hand the occupants a menu. Controls on the outlet permit the driver to adjust the air conditioning to his own satisfaction.

The system not only cools the

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April Room Unit Sales Up In 2 Areas

Knoxville—474

KNOXVILLE, Tenn. — More room air conditioners were sold here during April than any other major appliance, a report issued by the Knoxville Utilities Board reveals.

Some 39 dealers sold 474 room coolers, valued at $93,496, during the month. This topped automatic washers, the second best selling appliance, by 19%. Washer sales totaled 399 units, valued at $95,141.

During April, Knoxville dealers sold 342 refrigerators valued at $83,095, 290 home freezers, valued at $85,757, and 339 electric ranges, valued at $66,935.

Honor Refrigeration Men In 'Service Engineers' Week'

LOS ANGELES—This is "National Service Engineers' week."

A plan to call attention to the trained men and the industry serving the public's health, welfare, and comfort by proper servicing and maintenance of air conditioning and refrigeration equipment, has met with success and official recognition.

Support of the plan came from the International RSES

(Concluded on Back Page, Col. 5)

Philadelphia—4,833

PHILADELPHIA — Area distributor sales of air conditioners to dealers for April totaled 4,833, the Electrical Association of Philadelphia reported.

This compared with 4,634 for the same month last year and brought the total air conditioner sales from Jan. 1 to April 30 to 18,361 as against 18,720 for the like 1956 period.

Area distributors sold 2,662 refrigerators in April, EAP indicated. This was down from the 4,876 sold in the same month last year. Sales through the first four months reached 10,632, a substantial drop from the 21,944 in the same '56 period.

Home freezer sales hit 362 in April, off from the 401 in April, 1956 and sales through the first four months were 1,562 as against 2,082 last year.

Combination refrigerator-freezer sales by area distributors amounted to 1,642 in April and 8,079 from Jan. 1 to April 30, EAP said. There was no breakdown of figures for the like periods of 1956.

The report covers distributor sales in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties.

FRB Deems It Inadvisable To Regulate Credit

President 'Won't Ask' For Standby Power

WASHINGTON, D. C. — A special peacetime authority to regulate consumer instalment credit is not now advisable, the Board of Governors of the Federal Reserve System told congressional banking and currency committees recently.

"The Board feels that the broad public interest is better served if potentially unstabilizing credit developments are restrained by the use of general monetary measures and the application of sound public and private fiscal policies," a statement issued by the board said.

Later, President Eisenhower indicated he agreed completely with this conclusion. He said he doesn't intend to ask Congress for Presidential standby authority to regulate instalment credit.

(Concluded on Back Page, Col. 3)

NARGUS To Meet, Exhibit June 9

CHICAGO — Produce and meat department management, along with store modernization and expansion, will be featured topics of discussion and demonstration in several sessions at the 58th annual convention and food industries exhibition of the National Association of Retail Grocers at Navy Pier here, June 9 through 13.

The convention will have its traditional "Magnificent Mile" of food industry exhibits featuring the latest in store products and equipment. To avoid conflict with the exhibit hours, all busi-

(Concluded on Page 33, Col. 1)

N.Y. To Permit Flat Rate Rent Hike for Rewiring

NEW YORK CITY—The New York Rent Commission has announced that, in all houses under its jurisdiction, landlords can raise rents $2.75 per month when they rewire and $1 per month for every air conditioner owned by the tenant.

However, in rewired apartments where air conditioners are used, the commission said, landlords are required to provide all electrical wiring needed to connect the air conditioner to the apartment fuse box.

These permissible increases are flat rates, regardless of the size of the wiring job. Previously, the amount of increase would depend on the cost of rewiring.

The commission indicated that the old system opened the way to hidden finance charges and collusive agreements between landlord and electrical contractor.

Alcoa Introduces High Temp Soldering Materials To Cut Joining Costs for Aluminum Fabricators

PITTSBURGH — Two new high temperature soldering materials that promise to cut joining costs for aluminum fabricators were announced by Aluminum Co. of America.

The new products, performance-tested by extensive pilot applications, are Alcoa Solder No. 805, and Alcoa Soldering Flux No. 66.

"A high zinc solder (95% zinc, 5% aluminum), the new product has been used successfully in joining heat exchanger return bends, electrical connections, automobile radiators, Alcoa solder sheet assemblies, transition joints, and fins to tubing," the announcement said.

"It will join all aluminum alloys, and make joints between aluminum and other metals such as copper, brass, steel, etc.

"With a melting range of 715 to 725° F., the new solder can be heated by any of the conventional methods. It works most effectively when pre-placed in or near a joint, rather than being fed manually.

"Strength of the highly corrosion-resistant joints made with Alcoa Solder No. 805 is directly dependent on lap length, with a length twice the thickness of the thinnest aluminum member suitable for most applications. Alcoa Solder No. 805 could reduce joining costs by effecting high temperature joints that formerly had to be brazed or welded."

Alcoa Soldering Flux No. 66, recommended for use with the new solder, can be applied dry, or as a 70% flux—30% normal propyl alcohol solution. It reacts at 720° F. to wet aluminum with zinc, and there are no restrictions regarding the method of heating. Immediately following the soldering operation, the flux can be removed by flushing with water at 180° F.

Pollock Again Heads Detroit RSES Officers

DETROIT — All officers were re-elected to serve second terms at a recent meeting of the Detroit chapter, Refrigeration Service Engineers Society.

They are: William Pollock, president; Allen Christison, vice president; Reo Parent second vice president; James Carver, secretary; Kenneth Wade, treasurer; Mel Nobel, sergeant-at-arms; Mike Sarzynski, educational chairman.

Directors include: Alex Wilson, Herman Blair, Mickey Wood, Harry McCloskey, Francis Taylor, Ed Squire, Neill Collins, Dick Parlin, Willis Stafford, Jim Duffy, and Harvey Whitsett.

Union Carbide & Carbon Shortens Name; To Construct Technical Service Lab.

NEW YORK CITY — The name of Union Carbide & Carbon Corp. has been shortened to Union Carbide Corp., it was announced by Morse G. Dial, president.

The names of three divisions of Union Carbide have also been changed. Carbide & Carbon Chemicals Co. has become Union Carbide Chemicals Co.; Linde Air Products Co. is changing its name to Linde Co.; and Carbide & Carbon Realty Co. will be Union Carbide Realty Co.

It was also announced that Union Carbide Chemicals Co. has approved plans to build a technical service laboratory on its Westchester County property near Tarrytown, N. Y. It is expected that the laboratory will be completed early in 1959.

The laboratory will include facilities and personnel to serve a total of 24 major industries. Among these are the refrigerant, plastics, rubber, aerosol, surface coatings, and household specialties industries.

To have 63 individual laboratory units, the facility will contain a 200-seat auditorium which will be used for seminars and other technical meetings.

N. Anderson Leaves Firm, Starts Water Treatment Chemicals Mfg. Company

MACON, Ga.—Newton Anderson has resigned as president of Anderson Chemical Co. here and formed a new company known as Newton Anderson & Co.

The new firm, also located in Macon, will manufacture a complete line of water-treating-chemicals for industry, including scale and rust removers and inhibitors for boilers and air conditioning refrigeration systems.

M. A. Stinnette, former chief chemist for Anderson Chemical Co., and his assistant, John Mancin, will head up the new company's modern laboratories which offer a complete water analysis service to industry, it was pointed out.

The company's line of water-treating chemicals for air conditioning systems consists of a scale remover for condensers, a scale and rust preventive, and an algaecide for cooling towers; also a cleaner for ice machines. These products are being marketed under the "Anderson" brand and distributed through air conditioning and refrigeration supply wholesalers.

Westinghouse Offers Design, Presentation Course In Kitchens

MANSFIELD, Ohio — Westinghouse is offering its custom kitchens dealers the opportunity to learn more about the design and customer presentation phases of their business this summer at a special advanced training course at the Carnegie Institute of Technology, Pittsburgh.

Three faculty members of the Carnegie Tech architectural department will instruct the special classes—Prof. Raymond A. Fisher, Asst. Prof. Robert Burdett, and Asst. Prof. Maxwell Mayo. Supplemental instructors will include Will M. Kline, Jr., manager of the Westinghouse custom kitchens department, and Paul Heath of the same department.

The two-week course will begin June 17 and end June 29. It will be limited to 30 persons, who will study decoration and color styling; color harmony; effects of lighting; decoration principles; materials; perspective and rendering, and advanced design ideas, including islands, free-standing sections, new problems in structure and appliance applications.

Kline claimed this is the first time a manufacturer has offered this type of training to his dealers.

KRAMER

COIL and BAFFLE Combinations in all STOCK SIZES

TRIPLE TROUGH BAFFLES

The addition of a third trough — a unique Kramer feature — permits the use of a deeper primary trough and reduces the dripping to a minimum, making the baffle practically drip-proof.

SPECIAL BAFFLE FINISH FOR LONG LIFE

Non-corrosive metal with special finish remains attractive for the life of the cooler.

EASY INSTALLATION

Baffles shipped completely assembled — takes minimum installation time.

TEMPERATURE LEVEL

For average refrigerator temperatures, 35°F and higher, normal air defrosting can be used. For temperatures between 35° and 32°F, a time clock must be used to insure positive defrost.

WRITE FOR BULLETIN CB-276-A

KRAMER TRENTON CO. • Trenton 5, N.J.

43 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

For more information about products advertised on this page use Information Center, page 22.

WHY THE GAL IN THE MAILROOM WANTS A RAISE

The young lady insists we are running her department ragged, and she may be right. There has never been a greater volume of mail around here. Interest in the Bendix-Westinghouse story has been high. This division was formed because we believed the air conditioning and refrigeration industry wanted another major source for compressors —and the response has been gratifying.

We did not enter this field with our eyes shut. We knew we had to have something better to offer at a competitive price, be able to guarantee dependability, to meet schedules and service our accounts better than competition, if we were to be a major factor in this field—as we have been in the automotive air brake compressor business for nearly twenty-seven years.

Our story has made sense to many people. We are getting orders and inquiries. We're not the biggest in the field by far, but we're growing fast and this organization has equipped itself in every way to build, sell, and service compressors you can depend on. We want *your* business. Your inquiry on our complete line of hermetics ranging in capacity from ¼ to 7½ H. P. will get prompt attention. Evansville Division, Evansville 11, Indiana.

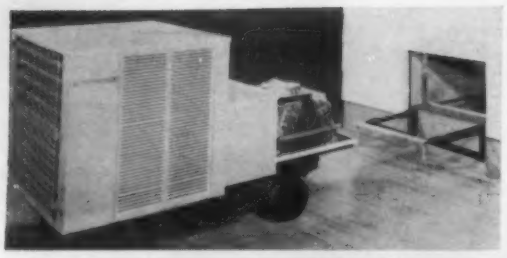
Export Sales: BENDIX INTERNATIONAL, 205 E. 42nd Street, New York 17, New York.

EVANSVILLE DIVISION of

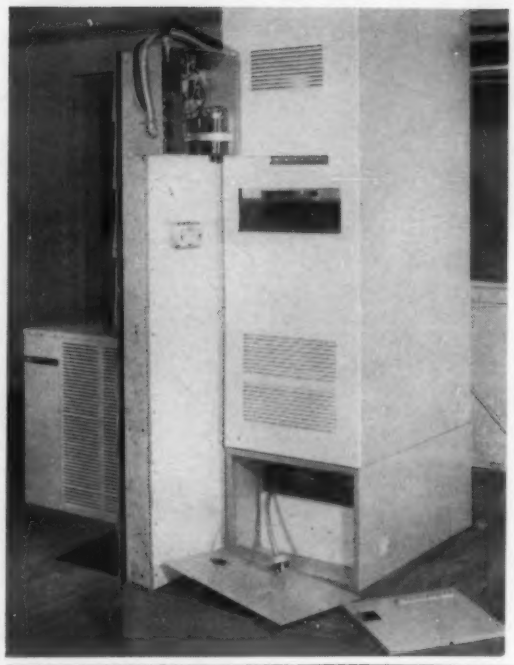
Bendix-Westinghouse

Automotive Air Brake Company

For more information about products advertised on this page use Information Center, page 22.



COOLING COILS are a part of the Frigidaire 2-ton condensing unit package that slides through the wall into the furnace in the NAHB experimental house.



RIGHT: Wall bracket, heavier but similar to that used for room units, can be used to support the condensing unit of the central air conditioner.

LEFT: Furnace is mounted on a plenum which is mounted over an air distribution chamber formed in the concrete slab of the experimental house.

Central Unit Installs Through Wall--

(Concluded from Page 1, Col. 2)

through the house wall into the furnace, it was explained.

The compact heating and cooling package is a highlight of an experimental and demonstration house designed and planned by the National Association of Home Builders Research Institute at Kensington, Md., near Washington, D. C.

Lehman pointed out that the new development is expected to lead to important changes in architectural design concepts.

"At the present time," he explained, "the conventional heating and cooling equipment 'core' is located in a central position in the house. Because of substantial installation economies, the new system undoubtedly will set architects and builders to thinking in terms of the outside wall of the house as a location for the conditioning units."

J. L. Gibson, Frigidaire's chief engineer, emphasized that the system will simplify installation and provide great flexibility for the builder and homeowner.

The summer cooling unit can be installed as a package by the builder, along with a gas furnace, or it can be added later by the homeowner without costly alteration, he added.

NO NEED FOR LENGTHY TUBING

Installing the furnace on an outside wall of the house instead of deep in the interior, eliminates the need for lengthy refrigerant tube connections from the cooling coils to the outside condensing unit as in conventional systems, he said.

Because the cooling coils are a part of the condensing unit package that slides through the wall into the furnace, refrigerant tube connections can be made by the manufacturer. This permits the entire unit to come from the factory, sealed and tested, under controlled conditions providing freedom from dirt and moisture in the refrigerant system. Electrical connections are simplified.

Homeowners can add the cooling equipment "long after" the furnace and heating system are installed, without making expensive structural alterations. In this case, the builder would construct the opening in the wall, lined up with the furnace plenum, ready for the through-the-wall installation of the refrigeration package later on. Plywood panels and insulation could be used to close the opening until that time.

Frigidaire's experimental system in the NAHB Research house is comprised of a vertical "down-flow" gas furnace of 105,000 B.t.u. input capacity; a 2-ton capacity air-cooled condensing unit (230-v., single phase), and 2-ton capacity inverted-V evaporator cooling coils with plenum. The cooling coil and air-cooled condensing unit, complete with refrigerant tubes, make up the single factory-fabricated package for installation, it was pointed out.

Inside the house the furnace is mounted on a plenum, which in turn is mounted over an air distribution chamber formed in the concrete slab on which the NAHB research house is constructed.

CAN INSTALL COOLING EQUIPMENT LATER

To install the cooling equipment, the coils are inserted through an opening in the wall and into the plenum under the furnace. The air-cooled condensing unit remains outside, mounted on a concrete slab. If desired the unit can be supported by a wall bracket of heavier construction but similar to those used for regular window type room air conditioners.

The condensing unit and cooling coil package weighs less than 350 lbs., so it can be handled and installed by two men using ordinary tools and equipment of the trade, it was stated.

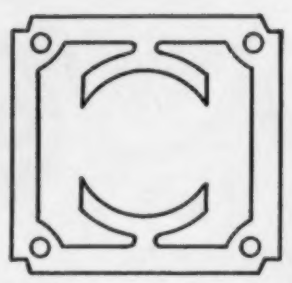
The NAHB research house, a six-room slab-on-grade frame structure with 1,280 sq. ft. of space, has three bedrooms, two baths, family room, living room, and kitchen. The heating and cooling system is of the perimeter radial type.

Operation of the new year-round air conditioning system is said to be simple. A thermostat control provides three settings, "heating," "cooling," and "off." The user makes the selection, depending on outside weather conditions, and the thermostat does the rest.

During the hot summer months, the air-cooled condensing unit outside the wall chills the cooling coils in the furnace plenum. Air from the return ducts is blown over the cooling coils and down into the air distribution chamber for discharge through perimeter outlets in various rooms of the house.

MIGHTY MITE
MOTOR PROTECTORS

fit almost any stator lamination



Regardless of the design of your motor stator, there is a Mighty Mite that will provide continuous and automatic protection against overload.

In operation, the Mighty Mite automatically breaks the circuit whenever the motor exceeds a predetermined safe operating temperature. When temperature returns to normal, the Mighty Mite automatically reconnects the circuit.

The Mighty Mite motor protector is accurately pre-calibrated to break the circuit at any required temperature up to 200°C. There is no further adjustment or handling necessary prior to actual installation in the stator. In addition, Mighty Mite protectors are packaged, "ready-to-use" in production line assembly.

Mighty Mite motor protectors are available as small as ¾" long x 5/16" wide for motors rated up to ⅓ h.p. 115/230 volts. Regardless of stator design, you can protect your motor with a dependable, fully automatic Mighty Mite motor protector.

WRITE TODAY FOR SAMPLES . . . ENGINEERING AID AVAILABLE

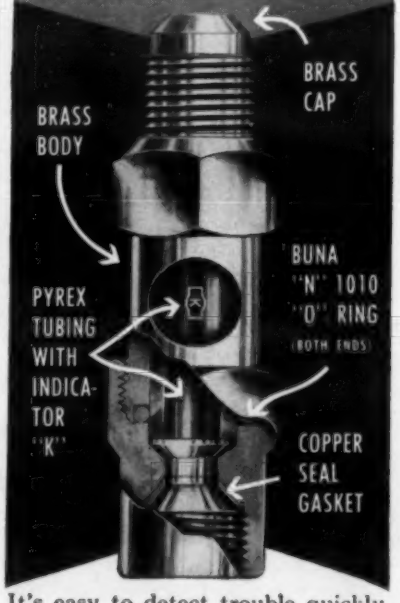
MIGHTY MITE MOTOR PROTECTORS

MECHANICAL INDUSTRIES PRODUCTION CO.

DETECT TROUBLE FAST!

IN ANY AIR CONDITIONING AND REFRIGERATION LIQUID LINE

KEROTEST MODEL R81C
IN-LINE *Liquid* INDICATOR



It's easy to detect trouble quickly in refrigeration lines with this indicator. Letter "K" is etched on pyrex heat-resisting tube which shows through sturdy brass body at sight port. When "K" is not magnified, it indicates a shortage of refrigerant or a clogged line. Available in male and female flare sizes. Maximum operating pressure —300 p.s.i. and maximum temperature 200° F. Easy to install.

See your Kerotest wholesaler!
Ask for Model No. R81C.

KEROTEST

KEROTEST MANUFACTURING CO.
2502 Liberty Avenue
Pittsburgh 22, Pa.

MARCO MOTORS offer you 3-WAY SUPERIORITY

IN DESIGN
IN APPLICATION
IN VOLUME PRODUCTION

MARCO INDUSTRIES, INC.
WOMELSDORF, PENNSYLVANIA

For more information about products advertised on this page use Information Center, page 22.

Admiral Has 30-Day Trial Offer on 'Dual-Temp' Unit

CHICAGO — Admiral Corp. opened the summer refrigerator sales season with a 30-day trial offer on it "Dual Temp" refrigerator-freezer.

W. C. Johnson, sales vice president, said that the unusual promotion was announced on Don McNeill's Breakfast Club program April 25 over the ABC radio network.

Twenty-four sheet billboards were posted in all major markets on May 1. Dealers newspaper ads also will be used. In addition to special ads in trade publications, a two-page four-color spread will appear in the June 15 issue of *The Saturday Evening Post.*

The Admiral official said that any person purchasing a 1957 Dual Temp refrigerator-freezer combination (models IMP1260, IMP1370, or IMP1390) during the promotion can use it for 30 days. If not completely satisfied he can return it to his dealer and get a refund. The consumer will be given such a certificate at the time of purchase.

Tenn. Utility Reports March Sales Top '56

CHATTANOOGA, Tenn.—The Electric Power Board of Chattanooga reports that electric appliance sales by dealers in March totaled $1,088,292.29 to exceed the $871,518.08 figure reached during the same month in 1956.

A board spokesman said household appliances accounted for $916,141.84 of the total for March, 1957, and commercial equipment sales added $172,150.45 to make up the total figure announced by the utility.

Following are figures on sales of three of the principal domestic electric appliances sold in the area:

Item	Units	Sales Value
Air conditioning units	246	$ 80,499.98
Refrigerators	372	104,141.40
Home freezers	133	56,525.00

NARDA Goodwill Dealers Caravan Signs 8 Iowa Outlets In Fort Madison Local

FORT MADISON, Iowa — Eight more retailers recently voted to join the National Appliance & Radio-TV Dealers Association through the Iowa Appliance Dealers Association as the Iowa goodwill dealers' caravan rolled on.

Three Des Moines retailers, R. D. O'Callaghan, Earl T. Holst, and Kenneth H. Clark, and two from Keokuk, John W. Marion and Tony Tallarico, came visiting and helped the Fort Madison retailers form a local organization.

John E. Phillips of Daughdrills, Inc., was elected chairman of the group and he appointed H. V. Russell of Fort Madison Home Appliances as chairman of the membership committee.

Other charter members of the local chapter of the Iowa Appliance Dealers Association are William Muerhoff, Muerhoff Electric; Eugene and Daniel Dorn, Dorn's TV & Appliances; Bert Lane, Industrial Plumbing & Heating Co.; Keith Ahlstrand, Ahlstrand Electric; K. J. Almendinger, Kenny's TV & Appliances; H. P. Paul, Paul Electric Co.; and John E. Phillips, Daughdrill's, Inc., the announcement said.

This is the fourth city to be visited by groups of dealers from Des Moines, previous ones being Keokuk, where Marion was elected chairman; Burlington, where Walter Fox was made chairman; and Davenport, where Elmer Lack was elected to the chairmanship, it was explained.

Firm Fined for Using Mails To Defraud

ROCHESTER, N. Y.—Operation of a contest brought fines of $1,800 to Newman & Sons, Inc., former Webster appliance firm.

The firm and its officers were charged with using the mails to defraud by raising the price of articles and then mailing certificates supposedly entitling winners to $65 in merchandise, it was explained.

The firm received $300 fines in U. S. District Court on each of six counts to which it had pleaded guilty through attorneys. The cases of Edward Newman, president; Herbert A. Laurence, Jr., vice president; and James B. Stark are pending. Stark formerly headed appliance store chains in Webster and Canandaigua, it was indicated.

To Promote 'Talking House' Builders Plan

CHICAGO — Hotpoint Co. builder department has launched a "Talking House" promotion in which more than 3,000 builders are expected to participate.

The promotion is a program in which a particular builder's model home will be equipped with one of several playback recording devices to tell that builder's sale story. It is a cooperative program between Hotpoint Co. builder department, local telephone companies, and participating builders.

The promotion is twofold: designed to create additional sales of individual builders and secondly to generally promote Hotpoint "Customline" appliances in builders' homes.

Distributor builder specialists have already begun to contact local telephone company representatives and are working with local builders to set up the program. Telephone company representatives will work with builder and distributor builder people to set up the corrent number of playback devices needed to attract house sales.

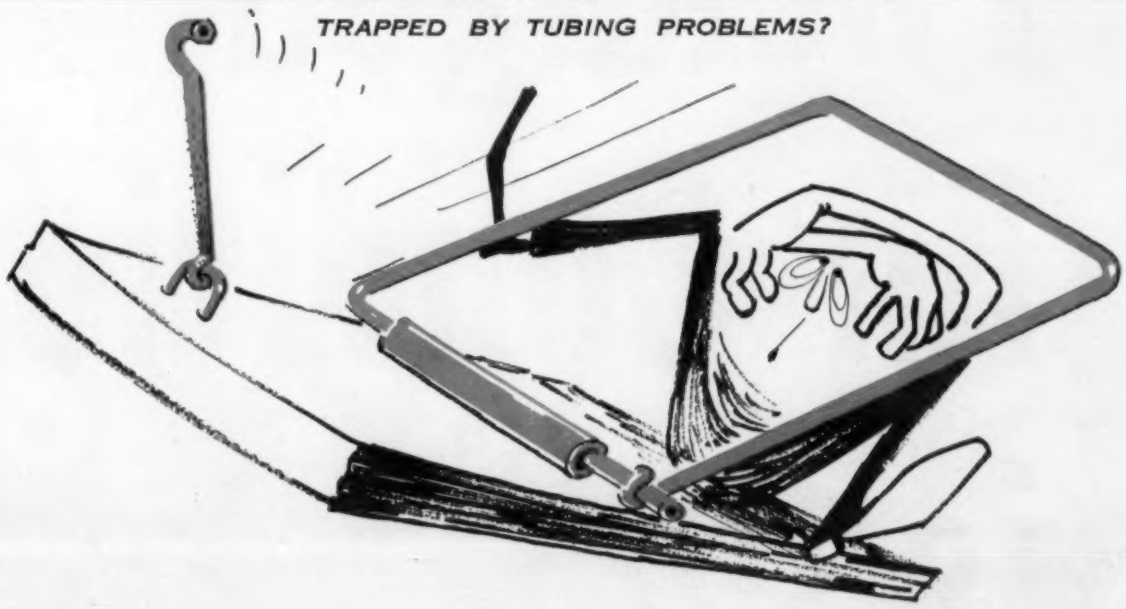
Hotpoint Co. builder department will act as national coordinator for the program. The company will also furnish promotional, merchandising, and advertising sales aid to attract builder and consumer attention.

Texas Supply Firm Holds Open House

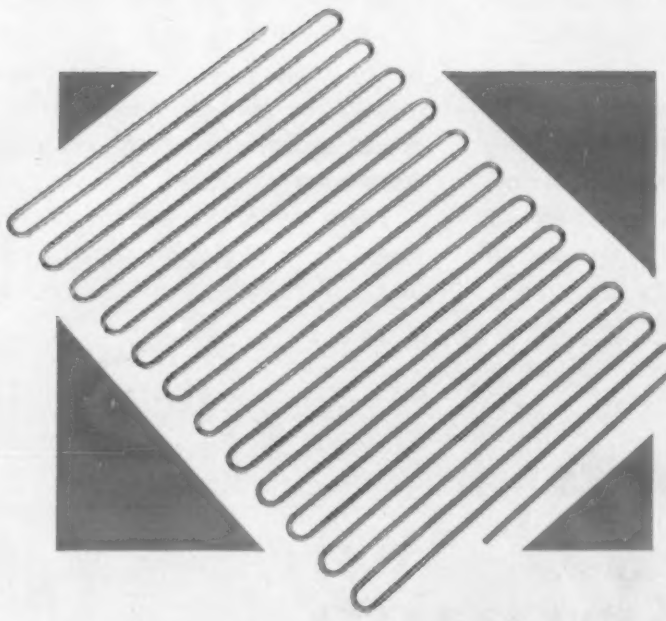
CORPUS CHRISTI, Texas—Open house was held in the new quarters of the United Supply Co., Laredo at 20th St. here.

Redmond
MICROMOTORS
One of largest stocks in the world!
FACTORY DISTRIBUTORS
MARVIN L. "FERGIE" FERGESTAD
CYCLO-FREEZE CORP.
6318 Cambridge, Mpls. 16, Minn.
West 9-6794

TRAPPED BY TUBING PROBLEMS?



STOP PROBLEMS COLD...
WITH GM STEEL TUBING AND UNEQUALED FABRICATION FACILITIES!



Temperatures stay where you want 'em with coils and condensers from Rochester! The industry's finest equipment forms, fits and fabricates these and other intricate assemblies for America's major manufacturers. Rugged, reliable GM Steel Tubing performs its way into more new products every day. Tubing quality, engineering capability and production facility form a cost-cutting, schedule-saving line-up that's ready to go to work for you! Call your Rochester Products Sales Engineer or write us direct.

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ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS CORPORATION ROCHESTER N.Y.

Westinghouse Packaged Air Conditioning is.....

Now Westinghouse Air Conditioning, long famous for dependability, is also the quietest in the industry! And has new sales appeal in the most complete and handsomely styled line available.

Westinghouse engineers achieved this enviable quietness by a complete redesign. Here's what they did: de-tuned the gas chambers of the compressor, designed a far more efficient muffler, engineered out objectionable frequencies, killed remaining noise in an acoustical chamber isolated from the air stream. Result?—"whisper-quiet" operation in all units . . . satisfied customers. What's more, Westinghouse gives you the most *complete* air conditioning "profit-family" in the industry—air or water-cooled units for any installation plus the all-new 1957 Westinghouse line of gas and oil-fired furnaces, manufactured with air conditioning in mind.

These are just several reasons why a Westinghouse franchise is so highly valued by leading contractors and dealers throughout the country.

YOU CAN BE SURE...IF IT'S

Westinghouse

AIR CONDITIONING DIVISION STAUNTON, VIRGINIA

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quiet!

Selling for Profit—*(In Residential Air Conditioning)*

Salesman Must Prove Value To Justify Higher Price

By Frank Klein

This series of articles is for those who seek to know the basic "appeals" and principles in selling residential air conditioning. This is the twelfth article in the series which began March 18.

In the field of Residential Cooling and Heating this is the business you have chosen:

1. You are in a business whose ceilings and opportunities have never been sighted.

2. You are in a business whose "growing pains" and anguish in survival was and is matched by only one other product of manufacturer and sale,—the automobile.

3. You are in a business which has, and will continue to offer PROFIT OPPORTUNITY, but only to the many people who can conduct their businesses, as a LEGITIMATE BUSINESS, based on legitimate profits and administered by recognized business principles.

In short, men and organizations who realize that:

1. They probably never have had, nor will they ever have for long, "THE BEST PRICE."

2. They must tie themselves to products and manufacturers with bonds of loyalty and mutual profit that in turn insure mutual and equitable loyalty and profit.

3. They must recognize the expedient need for SPECIALIZATION OF SALES EFFORT in diversified and allied fields of sale.

4. They must cultivate, learn and practice PROFESSIONAL SALESMANSHIP.

5. They must offer their product and services at a fair price and a profitable one.

6. They must learn to do an intelligent job of sales promotion and offer their product and services through IMAGINATIVE SELLING methods.

7. They must learn the value of customer satisfaction toward creating the value of their services and products in the consumer's mind.

8. They must be alert to changing methods in changing markets.

9. They must learn to sell the value of QUALITY rather than PRICE and relate that value of Quality to their own services and products toward the end of establishing INTEGRITY as a Value of Quality.

It would appear that PRICE for product and services is the greatest contributor to the apparent demoralization among the unsuccessful in the field. I say "the unsuccessful" for the simple reason that the successful people in our business are far from "demoralized."

However, PRICE IS INESCAPABLY TIED UP WITH QUALITY. The PROOF of QUALITY always justifies the PRICE. I rather think the "demoralized ones" belong to that group who either refuse to, or are incapable of proving the quality of their product and services.

To be practical and objective about these statements, let's do it by practical example, and let the chips fall where they may. Take an example where 5 tons of cooling is to be installed with 150,000 B.t.u. of heating (input). This is an "add-on" type installation with the coil in the furnace plenum.

The house is of the larger type ranch style design; it is new and being offered by plan for building. The architect has specified air cooled condensing for the cooling cycle. Requests for bids are made, with the owner taking bids subject to the architect's review.

John A., of "A" Air Conditioning & Heating Co., figures the job and arrives at the prices shown in Proposal 1. Complete to turn-key.

John B., of "B" Air Conditioning & Heating Co., figures the job and arrives at the prices shown in Proposal 2. Complete to turn-key.

The following in the proposals above will be noted as apparent discrepancies.

In Proposal 1. John A., failed to include a heating and cooling sub-base for the thermostat, but supplied it anyway.

In both proposals gas-piping and hookup is included in item 8 under refrigeration. Stack and vent for the furnace is included under item 6—ductwork.

By comparison and comparing item for item, we can of course determine the method and and character of each of these contractors insofar as labor, material, accounting, etc.

(Continued on next page)

PROPOSAL 1

Item:			
	1.	One 5-hp. air-cooled remote condensing unit	$ 579.50
	2.	One 5-ton plenum DX coil with valve	121.00
	3.	One 150,000 B.t.u. furnace with all controls for heating including 40 va transformer	165.00
	4.	One fan relay panel 24v coil	6.50
	5.	One furnace DX coil plenum	8.50
		Total OE f.o.b. factory	880.00
		Add OE profit @ 15%	132.00
		Add freight	63.00
		TOTAL OE COST	$1,075.00
	6.	Dustwork complete, labor and material, inst.	436.00
	7.	Electrical complete sub-contract, inst.	245.00
	8.	Complete refrigeration, labor and material, inst.	186.00
	9.	Refrigerant, 7.5 lbs. @ $1.00 per	7.50
	10.	Start-up 3.0 hrs. @ $5.00 per	15.00
	11.	Service reserve	25.00
		TOTAL INSTALLED COST	$1,989.00
		Add gross profit @ 10% of Items 6 thru 10	133.43
		TOTAL INSTALLED SELLING PRICE	$2,132.43

*Note ommission of heat-cool thermostat.

For more information about products advertised on this page use Information Center, page 22.

PROPOSAL 2

Item: 1.	One 5-hp. air-cooled remote condensing unit	$ 525.50
2.	One 5-ton plenum DX coil with valve	123.50
3.	One 150,000 B.t.u. furnace with all controls for heating including 40 VA transformer and H & C thermostat	182.50
4.	One fan relay panel 24v coil	9.75
5.	One furnace DX coil plenum (own make) .	4.25
	Total OE f.o.b. factory	$ 845.50
	Add OE profit @ 10%	84.55
	Add freight	83.00
	TOTAL OE COST	$1,013.05
6.	Ductwork complete sub-contract, inst.	510.00
7.	Electrical complete sub-contract, inst.	218.50
8.	Complete refrigeration, labor and material, inst.	130.00
9.	Refrigerant, 5.0 lbs. @ 85¢ per	4.25
10.	(forgot to charge for start-up)	000.00
11.	(no service reserve)	000.00
12.	Miscellaneous (?) 3% of Items 1 thru 9 ..	56.28
	TOTAL INSTALLED COST	$1,932.08
	Add gross profit @ 15% of Items 6 thru 9	129.41
	TOTAL INSTALLED SELLING PRICE ..	$2,061.49

mental telepathy, — YOU'VE GOT TO TELL 'EM TO SELL 'EM ! !

At this point isn't it up to the salesman to PROVE THE VALUE of what you want in order to justify the PRICE you are asked to pay? You AND your prospect are out to get the highest possible QUALITY at the lowest possible PRICE; thus you see once again that VALUE, QUALITY, and PRICE are irrevocably linked to each other.

We all know pretty well what price range will be involved before we go to buy what we want; however QUALITY and VALUE have not been predetermined, thus VALUE and QUALITY must be SOLD.

Throughout these articles I have talked about this thing called QUALITY. Just actually what is it? I like Clarence L. Barnhart's definition, Editor of the Thorndike-Barnhart Comprehensive Dictionary (better than Webster's, — its more earthy). Barnhart says: "QUALITY (1) something special about an object that makes it what it is:—"

Manufacturers of the products you sell insert QUALITY through FEATURE ASPECTS; some of them obvious, some of them apparent, some of them obscure to the eye. They do this that their products may have a longer productive life, be more dependable, serve the purpose better and PROVE THE VALUE for the PRICE they ask.

These FEATURE ASPECTS must be revealed in your sales approach in order to justify the price you must get.

YOU CANNOT DO THIS BY MAILING IN A BID or STANDING ON PRICE ALONE! A racing car of the finest and highest QUALITY cannot win a race without an experienced driver.

When you first "took on" the line of products you now handle, —something about them must have made you say: "I like that, —I think it will sell." It is that very same "something" that will attract your prospect, yet how many times will you fight against a PRICE objection by using that "something" in order to prove VALUE and justify the PRICE you must have?

There is no such thing in a COMPETITIVE market as "Price demoralization." Price demoralization only exists in a DISTRESSED market, at which time it no longer is a competitive one.

If you have VALUE in your product and service as a result of QUALITY, and you learn to sell intelligently, through imagination, PRICE cannot exist as an insurmountable objection; you will no longer have to meet competition,—you will start to MAKE competition, for you will have learned the "secret" of PROVING VALUE.

(To Be Continued)

Proving Value--

(Continued from preceding page)

However for a full comparison it must be said that John A., not only paid more for his original condensing unit equipment, but had value and quality in the merchandise as proof.

John B., paid more for his furnace equipment, but this was only because of his buying method. The furnace quality in each case was the same.

This is also true when considering the comparative prices for the DX Coils—the difference is due to buying method entirely.

However, let us compare the fact that only $70.94 separates the two selling prices; this in the favor of John B. Yet, compare the fact that John B., has but $213.96 total profit in the sale, while John A. has $265.43.

Furthermore, John A., has himself covered with a definite Service Reserve to take care of normally anticipated "call-backs," while John B., prefers to throw a "blanket" miscellaneous item predicated on the 3% which will probably take care of the things he might have forgetton, but leaves no cushion for the "call-back."

It is not necessary to dwell on the fact that many a job has been lost on a lot less than a $70.94 differential. On the other hand many a contractor has run himself into the poorhouse taking jobs such as the way John B., bid this one.

Conversely when sometimes much more than the $70.94 existed as a differential, many a job has been SOLD through MERCHANDISING and intelligently selling QUALITY by VALUE to justify the differential, with the chances excellent by record where such a differential exists only at $70.94 particularly when the contractor and/or dealer had the quality and plus features that John A., had to sell.

In the above example John B., got the job—ON PRICE. Why? Because John A., flipped his bid in and let it stand on PRICE alone, making no attempt to justify his price on the basis of VALUE by QUALITY.

My point is that THERE IS VALUE IN QUALITY AND THAT IT HAS A DIRECT RELATIONSHIP TO PRICE,—BUT VALUE HAS TO BE PROVEN TO JUSTIFY THE PRICE. This cannot be done by

Only a HENRY DRIER proves its dryness with a Hiss©

To obtain maximum drying efficiency, Henry thoroughly reactivates each drier and, by an exclusive, patented process of manufacture, provides positive indication, by pressure sealing, that the drier is tight, dry, and factory-fresh on reaching the user.

Complete Size Range—*The complete range of types, capacities, and connection sizes permits the selection of the proper Henry drier for any installation.*

STOCKED AND SOLD BY LEADING JOBBERS.

*"They Hiss and Tell"**

*TRADE-MARK

When the end connection seal of a new Henry drier is loosened prior to installation, there is a hissing sound due to the escape of dehydrated air.

HENRY VALVE CO.

MELROSE PARK, ILLINOIS (Chicago Suburb)

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VALVES, DRIERS, STRAINERS, AND ACCESSORIES FOR REFRIGERATION, AIR CONDITIONING AND INDUSTRIAL APPLICATIONS

LISTED BY UNDERWRITERS' LABORATORIES, INC. UNDER RE-EXAMINATION SERVICE FOR WORKING PRESSURES OF 350 P.S.I. AND 500 P.S.I.

For more information about products advertised on this page use Information Center, page 22.

Growth of Hospital Air Conditioning Poses Problem:

How To Prevent Spreading Air-Borne Infections

WASHINGTON, D. C.—With an increasing trend toward air conditioning of hospitals, the industry must solve the difficult problem of preventing the spread of air-borne infectious bacteria and viruses.

The seriousness of this problem was outlined at the recent government-industry symposium on air conditioning sponsored here by the U. S. Department of Commerce in a discussion by Richard P. Gaulin, hospital mechanical engineer of the U. S. Department of Health, Education, and Welfare.

"Knowing the requirements of the various areas of the hospital, temperature and humidity control present no great difficulty," Gaulin said. "We have the necessary equipment and controls to accomplish the job and they are being constantly improved.

Air Cleanliness, Movement Problems

"Air cleanliness and air movement are the two most difficult problems we face. We speak of air cleanliness when our ultimate goal should be air sterilization," he explained. "To date we have not accomplished this in a manner that can be applied practically to the handling of large volumes of air."

Studies by the Research Foundation of the University of Toledo, he said, indicate the removal of about 98% of air-borne organisms by a dehumidification process using lithium chloride. Similar research using solid sorbents is under way, Gaulin added.

Trend To Hospital Air Conditioning

"The past five years have seen an increasing trend toward air conditioning in modern hospital design. This was first noticed in the south, where today indications are that nearly all hospitals are including complete air conditioning, and is now noticeable in all parts of the country. It is a normal trend in a population which is not only accustomed to, but demands cooling for comfort in its residential and commercial establishments," said Gaulin.

"In recognition of the possible benefits of air conditioning, the Federal government through representatives of the various interested governmental agencies, is at the present time engaged in preparing regulations which will permit approval of air conditioning installations for federally owned and operated hospitals located within certain climatic zones," he disclosed.

Institutional Building Approximates 3% of All

"Hospital and institutional construction today amounts to roughly 3% of the total annual construction in the country. This 3% of total construction plus the un-met bed need, plus replacement due to obsolescence, and the modernization potential of the thousands of hospitals which today are without air conditioning represents a fairly respectable market for air conditioning equipment," Gaulin then further suggested.

"Now what is the therapeutic value of air conditioning? A great amount of study has been done on the physiological effects of temperature and humidity on the human body. The American Society of Heating & Air-Conditioning Engineers as long as 30 years ago began laboratory studies of the subject.

"The John B. Pierce Laboratory of Hygiene has contributed greatly to our understanding of the subject. The knowledge available today generally relates to normal people in average physical condition, but the findings of this research provide a better understanding of the possible application of air conditioning in the treatment of the ill," he said.

"Very briefly and in simple form let us consider the heat mechanism of the human body. The process of metbolism produces bodily heat which in cool environments is usually in excess of the quantity required to maintain the normal body temperature of 98.6° F.

"This normal temperature is maintained by action of the endocrine and nervous systems upon the respiratory and circulatory systems. The circulatory system disposes of excess heat by bringing it from the interior regions of the body, by means of the blood stream to the skin surface for dissipation by radiation, convection, and sweating.

"This action corresponds closely to the refrigeration cycle of evaporator, to compressor, to condenser. When heat is not dissipated from the body at a rate sufficient to maintain a normal temperature, fever results. Fever in turn, increases the metabolic rate of cell structures further increasing the heat production. Thus a vicious cycle may be established, which can result in great damage to the individual," Gaulin explained.

How Environment Can Benefit

"It therefore, becomes apparent that any condition which alters the normal activities of the heat production and heat dissipation mechanism of the body will be benefited by an environment which will compensate for this maladjustment.

"Temperature and humidity control are generally recognized to have definite therapeutic value in the treatment of such clinical conditions as head injuries or operations which affect the heat regulatory center of the brain; cardiac conditions which may be adversely affected by the strain of increased blood circulation induced in an attempt to dissipate excess heat; hemorrhagic conditions which reduce the quantity of blood in circulation; thyrotoxicossis or excessive secretion of the thyroid gland which increases basal metabolism; severe burn conditions where large skin areas are damaged reducing the evaporative cooling area; diseases of the liver and kidneys and many diseases associated with fever.

"In addition to the above, controlled temperatures, and humidities and air cleanliness are requisites for the treatment of many allergies," Gaulin said.

"Not to be overlooked is the increasing use of hypothermia in cardiac surgery. During such surgery body temperatures are

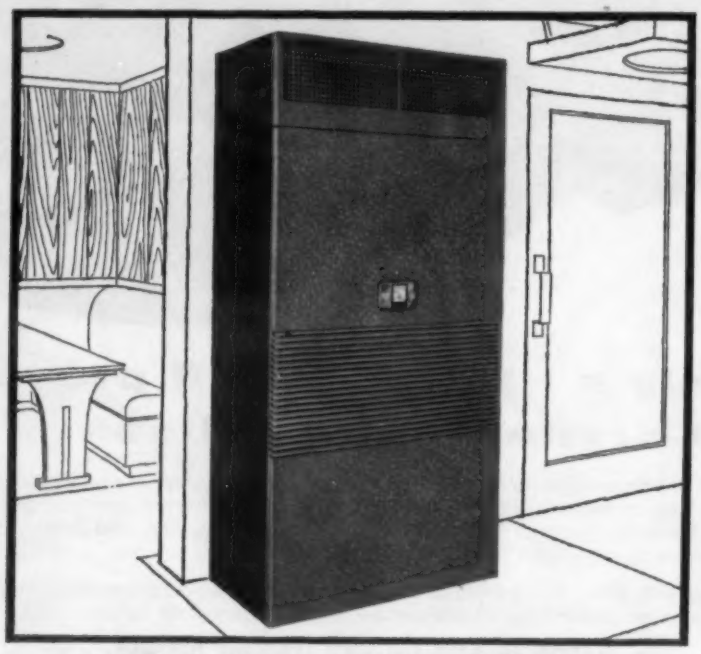
(Continued on next page)

YOUR AMERICAN-Standard DISTRIBUTOR
AIR CONDITIONING DIVISION

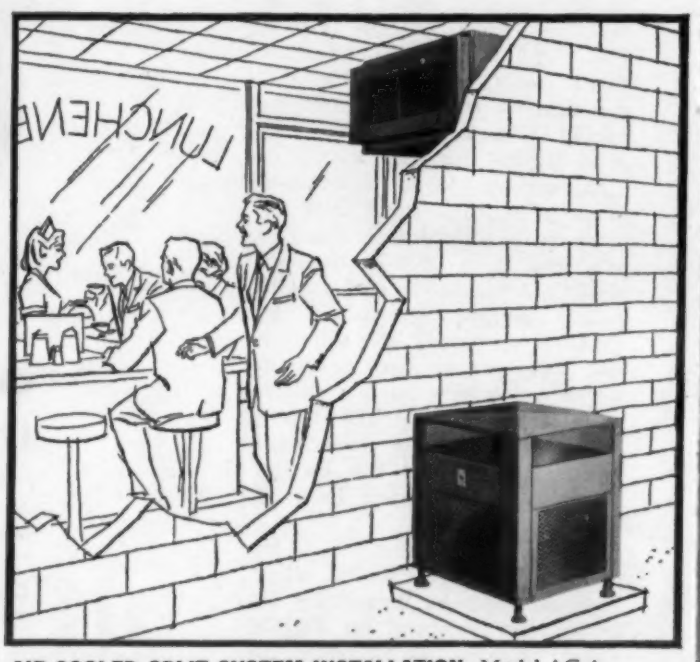
STOCKS EXACTLY THE LIGHT COMMERCIAL

Air-cooled and water-cooled units . . . 2, 3, 3½ and 5 hp packages and add-ons

You can meet the requirements of *any* light commercial installation from the *complete* line of air-cooled and water-cooled package units and add-on units made by American-Standard Air Conditioning Division. No need to maintain a costly inventory . . . no delays in finishing your jobs—you deal with a local distributor who's always ready to give you fast delivery. What's more, he's an air conditioning *specialist*. He'll pitch in with valuable technical help whenever you need it . . . arrange credit if necessary . . . and he'll give you full cooperation on advertising and promotion. Contact him today for complete facts—he's listed in the yellow pages of your telephone directory.



CONVENTIONAL WATER-COOLED PACKAGE INSTALLATION. Model CCA water-cooled package units are handsomely styled, ruggedly built, extremely compact. The 5 hp size, shown here, is only 42 inches wide; the 2 and 3 hp sizes only 25 inches wide. All are competitively priced . . . all have 100% hermetically sealed refrigerant circuits covered by 5-Year Protection Plan, and numerous engineering extras that mean top performance, low operating cost. Units are factory assembled for quick, economical installation. *Your customer knows that American-Standard quality protects his investment.*



AIR-COOLED SPLIT SYSTEM INSTALLATION. Model AC-A outdoor air-cooled condensing units and Model RC-B blower equipped evaporator units combine to provide 2, 3 or 5 hp capacity. Covered by 5-Year Protection Plan. The evaporator can be suspended from any suitable location within the conditioned area . . . doesn't use any valuable floor space. Four-way directional air-flow grille (optional equipment) permits precise control of air distribution for maximum comfort. The evaporator can also be connected to ductwork. *Your customer knows that American-Standard quality protects his investment.*

For more information about products advertised on this page use Information Center, page 22.

Hospital Air Conditioning--

(Continued from preceding page)

sometimes reduced as low as 83° F. Special temperature treatment through air conditioning for operating rooms where such surgery will be done will assist in maintaining the body temperature during the operation.

Hospital Presents Specific Problems

"I believe it is also of the utmost importance that we bear in mind that the hospital, because of its functions and clientele served, presents many specific problems for the air conditioning system designer not encountered in other contemporary building types. The term comfort conditioning system very often applied to residential and commercial installations does not apply in like manner to the hospital," Gaulin emphasized in his comments.

"In the past there was a natural reluctance on the part of the medical profession, hospital authorities and hospital designer to advocate the installation of warm air heating systems. This reluctance was justifiably based upon the hazard of cross-infection and odor nuisance which might result from the general recirculation of air within the hospital.

"Studies over the years by eminent investigators are somewhat inconclusive but there is sufficient evidence to indicate that air-borne infection may constitute a potential hazard. The matter of odor nuisance is well established.

"With reference to infections in hospitals, it should be noted that the air-borne route is only one of the means by which infection is spread, and that numerically the number of infections is comparatively small. However, infections can be serious or produce serious complications, and one infection is too many.

"Needless to say, the medical profession and hospital authorities take all precautions available to reduce this hazard. We are all aware of sterilization, masking, gowning, handwashing, isolation, and many other aseptic techniques practiced in the hospital to reduce infection.

Organisms May Be Transported

"However, the fact that pathogenic organisms may be transported through the air complicates the design of air conditioning for hospitals. We like to think of the well designed system acting as a supplement to the aforementioned aseptic practices of the hospital," he said.

"Dr. Charles W. Letourneau, well known hospital authority, in a series of articles in the February and March, 1957, issues of *Hospital Management* states, and I quote:

" 'The patient comes to the hospital to be cured of his ailments, and instead he may acquire another disease, an infection that is worse than the ailment for which he was hospitalized.

" 'How widespread infection is in our hospitals has not yet been determined but certain it is that reports of nosocomial infections are occupying more and more space in the medical journals.

" 'Patients suffering from bacterial infection, whether this be an infected wound, an intestinal infection, an upper respiratory infection, or one of the exanthemata represent a hazard in the hospital. The air becomes contaminated by patients who laugh, sneeze, talk, sigh, or cough. The air can also become contaminated by dried microbes which have adhered to particles of dust stirred up in the normal course of hospital activity. Pus from wounds, bacteria in infected droplets, or infected excretory matter get on dressings, the hospital gowns, the bedding, the blankets, and utensils. They dry and then become air-borne whenever the bed is made, the dressings are changed, the floor is cleaned or the patient is moved.'

Fundamentals To Be Considered

"The following fundamental information must be considered in any hospital application," Gaulin declared.

"1. The hospital patient, due to his incapacitation or for other reasons, may be susceptible to infections from mild concentrations of pathogens, which would have no affect upon normal healthy individuals.

"2. In general, outdoor air used for ventilation if taken from above the roof is comparatively free of pathogenic organisms. Air becomes contaminated after entering the hospital.

"3. Recently the medical literature has contained many reports of the emergence of antibiotic - resistant staphylococci and streptococci. These resistant organisms are unduly prevalent in hospitals and are important as infectious agents.

"4. Pathogenic bacteria and pathogenic viruses are the organisms which make indiscriminate circulation of air a potential hazard. In general, the size characteristics of these organisms are as follows:

"a. Bacteria are generally considered to range in size from approximately 1 micron (about $\frac{1}{25000}$ of an inch) to 10 microns and are visible under the optical microscope.

"b. Viruses are ultramicroscopic in size, generally considered .1 micron and smaller. They are visible under the electron microscope to .001 micron.

"Bacteria and viruses which have settled out of the air may be reintroduced into the air by traffic over floors and by many of the housekeeping activities such as: bedmaking, linen changing, dusting, sweeping, or mopping," Gaulin pointed out.

"5. Of interest is a report of over one hundred million streptococci found in one ounce of dust collected in a 26-bed hospital ward during an outbreak of streptococcal sore throat and follicular tonsillitis. This amount of dust reflected acceptable housekeeping.

"6. Bacteria and viruses, depending upon conditions, retain their viability for a considerable length of time. A few examples as reported are:

"Streptococci, six to 12 weeks; virulent diptheria organisms, in dust three months; pneumococcus, several weeks in dried state in dust; Melbourne strain influenza may retain its potency for embryonated eggs 45 days.

"This gives some idea of the conditions we must contend with in applying air conditioning to a hospital," Gaulin said.

"Among the measures which have been used for reducing the hazard of contaminated air are: filtering, ventilation, sterilizing lamps, and bactericidal aerosols.

(Concluded on next page)

RIGHT UNIT FOR EVERY AIR CONDITIONING JOB!

AIR-COOLED PACKAGE INSTALLATION. Model ACP air-cooled packages are available in 2 and 3½ hp sizes; completely self-contained, combining under one jacket a powerful twin compressor assembly, condenser, evaporator and blower. Refrigerant circuit is 100% hermetically sealed and covered by 5-Year Protection Plan. Unit can be located outdoors on roof, as shown, or installed through or against any outside wall, with *or* without ductwork for air distribution. *Your customer knows that American-Standard quality protects his investment.*

WATER-COOLED PACKAGE INSTALLATION WITH DUCTWORK. Placed adjacent to the conditioned area, the Model HCA-F blower-equipped package unit can be quickly and economically installed with simple ductwork to air condition any small store, office or other commercial establishment . . . Available in 2, 3 and 5 hp sizes, compactly designed, sturdily built. All have 100% hermetically sealed refrigerant circuits covered by 5-Year Protection Plan. *Your customer knows that American-Standard quality protects his investment.*

AMERICAN-Standard

AIR CONDITIONING DIVISION

AMERICAN-Standard PRODUCTS

GOOD NEIGHBORHOODS ARE OUR NATION'S STRENGTH
ACTION
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As a local business man, your neighborhood is important to you. As a local business man, you are important to your neighborhood. Support ACTION!

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Please send me by return mail the name of my nearest Air Conditioning Division distributor.
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Hospital Air Conditioning--

(Concluded from preceding page)

"Of these, filtering and ventilation are the most practical and most widely used in modern hospital practice. Sterilizing lamps have been used to some extent in specific areas of the hospital. Aerosols have seldom been used. For certain very sensitive areas of the hospital, ventilation alone using conditioned outdoor air with no recirculation is preferred at this time," he declared.

"In general, the areas requiring the most careful study are: operating and delivery rooms, nurseries, patient rooms, isolation areas, recovery rooms, infectious disease and virus laboratories, autopsy, and laundry. Time does not permit discussion of all areas of the hospital but the operating rooms, patient rooms, and isolation rooms, are three areas whose requirements may be of particular interest.

"In regard to operating rooms, recent medical literature contains many reports of an increase in infection of clean surgical cases. It is the opinion of many medical authorities that such infection is air-borne. In view of this situation and because we have been unable to provide air sterilization, ventilation as a dilutent or medium for the removal of organisms is the generally accepted installation for operating and delivery rooms.

Recommended Conditions

"The following conditions are recommended for operating, delivery, cystoscopic, and fracture rooms," Gaulin said.

"1. Temperature of from 72° F. to 76° F. as required by the surgeon.

"2. Relative humidity of 55% to reduce the hazard of static spark.

"3. Ten air changes per hour.

"4. 100% fresh conditioned air.

"5. No recirculation of operating room air during the time operating rooms are in use.

"6. A positive pressure within the operating room to prohibit the entry of air from the corridor or other unsterile areas.

"7. Exhaust air taken off from a point near the floor to remove dust and the heavy anesthetic gases.

"8. Installation to conform to that portion of NFPA Bulletin No. 56, 'Safe Practices for Hospital Operating Rooms,' which pertains to explosion hazards.

"Because of the everpresent possibility of cross-infection, particularly of the respiratory tract, and to prevent the spread of odors, it is desirable that air circulation be confined to the individual rooms of this area. However, patient room air may be recirculated through a central conditioning system and be redistributed to the patient rooms with an acceptable degree of safety if properly filtered. A temperature of 75° F. and relative humidity of 45 to 50% are recommended for this area.

GOVERNMENT-INDUSTRY SYMPOSIUM at which Richard P. Gaulin spoke also featured several panels composed of representatives of government and industry. Members of the panel which closed the Symposium's second day were left to right: James Morris, Chief Engineer of Repairs, Public Buildings Service, General Services Administration; George A. Grimm, Chief, Utilities Operation Div., Properties and Installations, Dept. of Defense; R. C. Serfass, vice president, York Div., Borg-Warner Corp.; and Cecil Boling, president, Dunham-Bush, Inc.

Minimum Ventilation

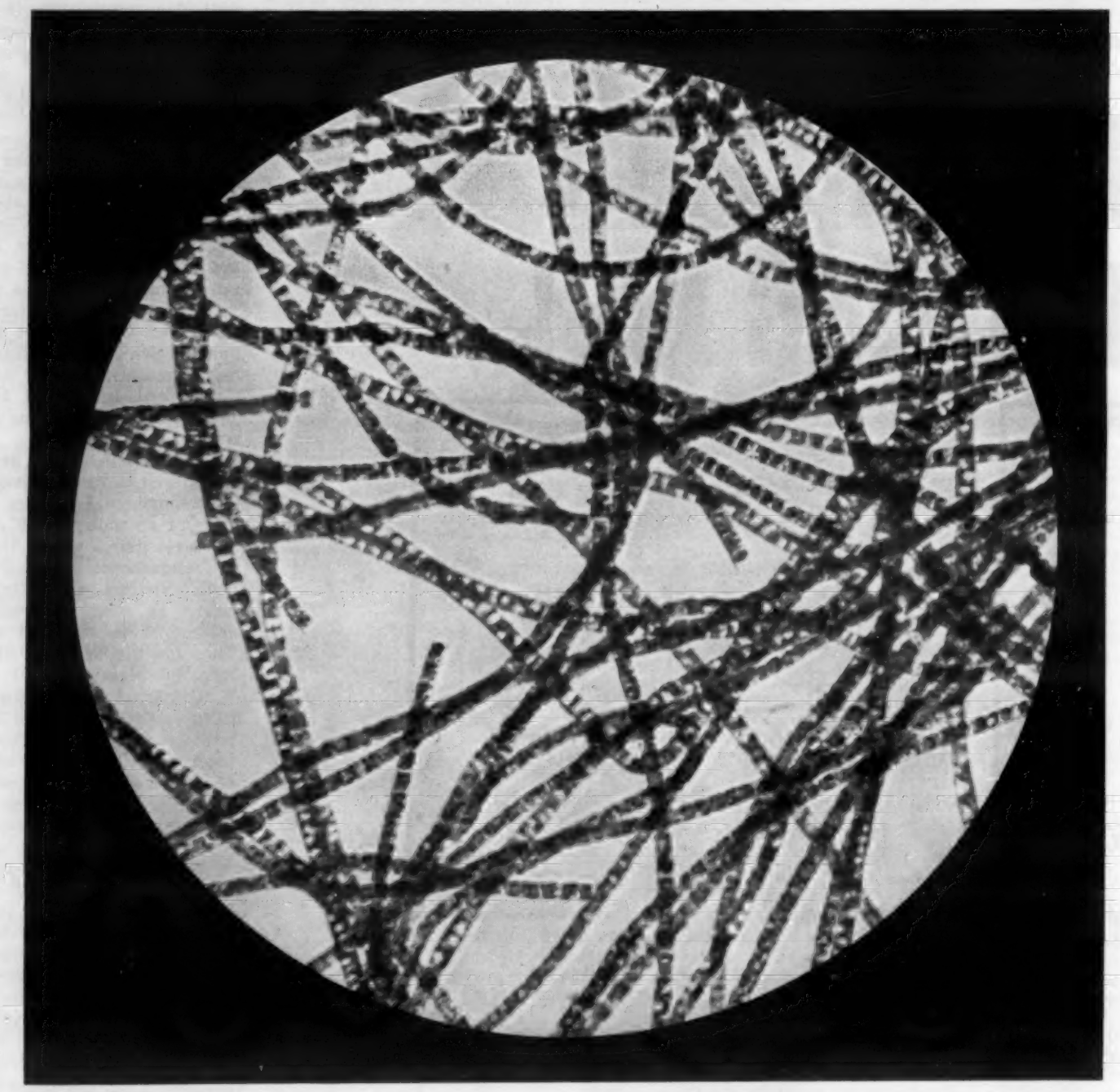
"A minimum ventilation rate of 1½ air changes per hour is recommended for patient rooms.

"The isolation unit is used for contagious disease and odorous cases. Usual practice is to provide a negative pressure within the area to reduce the spread of contaminated air. The system should provide for the outboard exhaust of all air. In small hospitals handling few isolation cases, a by-pass for recirculation of air may be desirable. This permits more economical use of the area when not needed for isolation cases.

"Room unit conditioners of the induction or aspirating type are not recommended for this area because of the necessity for periodic decontamination of the coils.

"The three areas just discussed are representative of but a few of the many areas of the complex hospital system and the problems posed by each area. Hospital air conditioning is a comparatively new field, an unstable field, changing as medical knowledge increases.

"We in the air conditioning field have a responsibility not only to keep abreast of the changing medical picture but also to incorporate sufficient flexibility in the system, and the equipment used, to permit future adaption," Gaulin said.



Algae such as these are no problem in cooling towers treated with "Virginia's" new algae•cides

Growth of algae occurs in every untreated reservoir of water exposed to sunlight. It is one of the common causes for loss of heat transfer efficiency. Of some 30,000 species of algae known to exist, one of the more common types found in cooling tower systems appears above in photomicrograph. You can control these and other algal growths with two new "Virginia" Algae•Cides.

Algae•Cide No. 1 is an organic copper compound many times more active than ordinary copper salts. Algae•Cide No. 2 is toxic also to bacteria; it is recommended for slime elimination, for mixed slime-algae infestations, and for copper resistant algae.

"Virginia" Algae•Cides No. 1 and No. 2 give you maximum algae control at low cost. Order from your wholesaler today or write to Refrigeration Division, VIRGINIA SMELTING Co., 148 Jefferson St., West Norfolk, Va.

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Valves & Fittings

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For more information about products advertised on this page use Information Center, page 22.

Residential A. C. Operating Costs Vary In Identical Homes Due to Human Factor, But It's Rare Owner Who Complains

CLEVELAND—Cost of operating residential air conditioning can vary widely even with identical systems in similar homes because the owners apparently differ considerably in running their systems.

Field research that revealed this point was outlined by Ralph A. Gonzalez, director of technical services, Airtemp Div., Chrysler Corp., at the second technical conference of the National Warm Air Heating & Air Conditioning Association here.

Because operating costs will be sharply affected by size and perhaps make of equipment, house construction and orientation, etc., these variables were virtually eliminated, Gonzalez explained, by studying groups of identical homes with the same orientation and systems in three housing developments in Haddonfield, N. J., Tulsa, Okla., and Dallas.

Total Operating Costs Varied

Analysis of power company records for the homes in question, he said, showed that for 10 selected "identical" homes in Haddonfield total operating costs for the three summer months (July through September) varied from a low of $12.86 to a high of $55.10.

In the 12 Dallas homes for the four months of June through September air conditioning operating costs varied from a calculated $32.55 to a high of $78.60.

Cost variations in the Tulsa homes, according to Gonzalez, ranged from $52.30 for the three-month period to $108.

(All the above cost figures were based on the local prevailing power rates.)

"The study clearly shows that wide variations in power consumption for air conditioning purposes do occur even when all differences of heat gain and equipment performances are eliminated or are reduced to the minimum," Gonzalez declared. "This group of studies further indicates:

Studies Indicate

"1. There are wide variations in power used for air conditioning just as there are variations in residential power used for other purposes in identical houses. In terms of the high consumers, the low consumers used less than one-half as much power for air conditioning identical houses.

"2. There is not any definite relationship between the power used for air conditioning and for non-air conditioning purposes," he pointed out. "In other words, the higher power consumers in the non-air conditioning months are not always the high users of power for air conditioning.

"3. Many of the homeowners are currently exercising considerable manual selection of operating time on their own air conditioning equipment. There is not any evidence that the usage variations are motivated by reasons of economy any more than by reasons of personal preference," Gonzalez deduced.

"For example, if economy were the major consideration, it would seem reasonable to expect the power consumed for air conditioning to bear a closer relation to the power consumed for other purposes.

"4. The variations in power use due to the operating preferences of the homeowners are currently of such magnitude that field testing for differences in equipment and construction effects cannot be expected to yield conclusive answers."

While the above findings can be of scientific and academic interest, they also imply a practical sales problem—that of giving an accurate answer to the prospect who asks "What does it cost to operate residential air conditioning?" Gonzalez commented.

"Among the other important items of information that we already have on this subject, the following appeal to be as being particularly significant:

'Significant Data'

"1. Owners of residential air conditioning practically never complain of operating costs.

"2. Analytical owners frequently find that their operating costs are offset by savings in other categories of expense."

Referring to the three studies he had reviewed here, Gonzalez said that "none of these neighbors raised any issue over their operating costs with the installer or power firm people.

"So how should we handle the situation when the prospective purchaser asks about operating costs? Very much as we have been handling it in the past," he suggested.

One of the most effective methods, he said, is to mention the operating costs of installations in the same area.

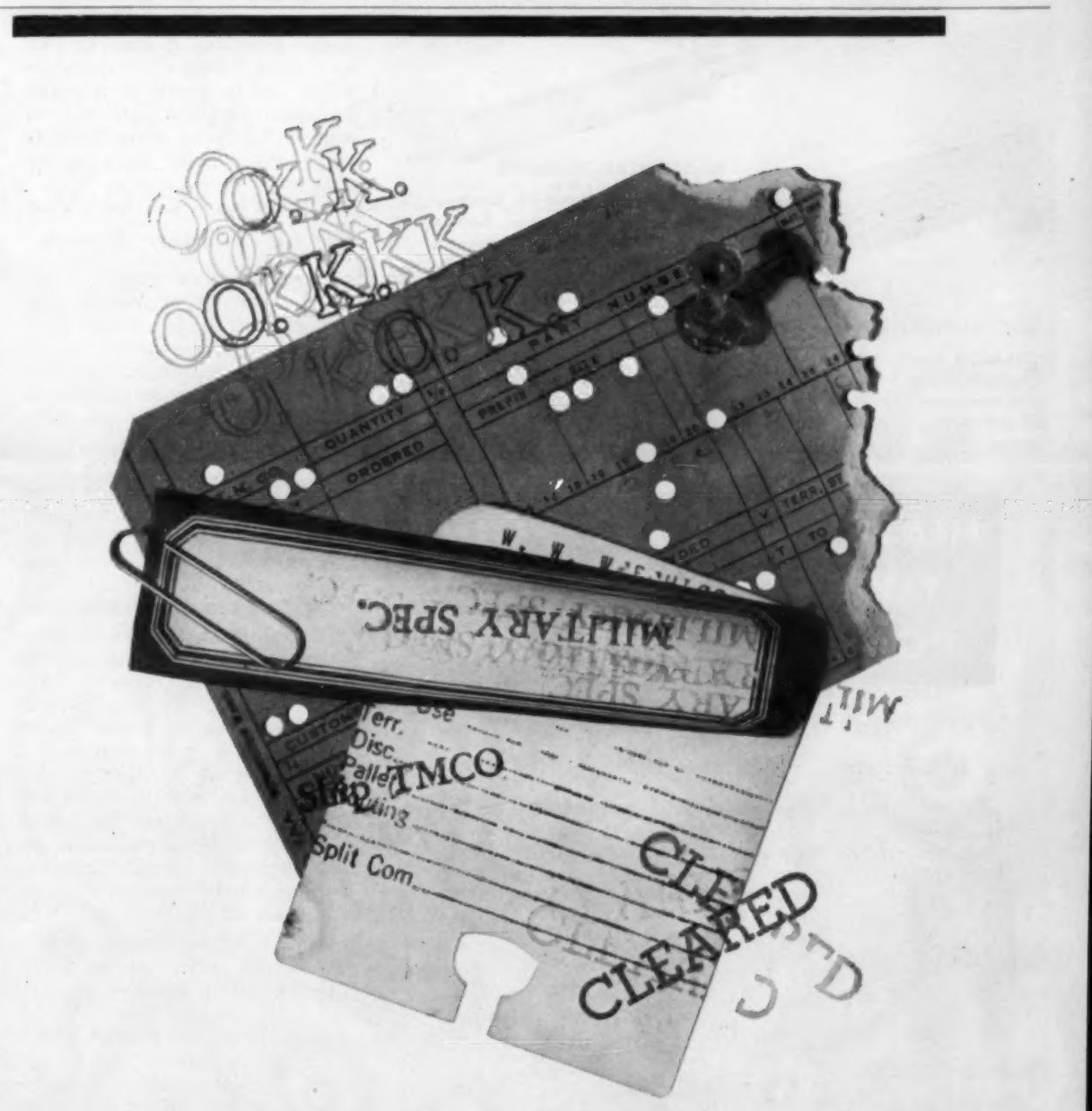
"The prospect sometimes registers that Schulte on Lamar St. estimates that it costs him less than so many dollars to operate his air conditioning for the summer season—but, perhaps more often, he registers the thought that 'if Schulte does not find the expense a burden, neither will I.'

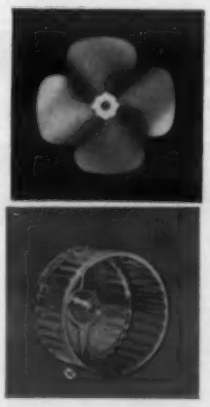
"Another frequently used approach," Gonzalez explained, "is to mention the costs of operation per hour. This can be quite accurately stated and is usually the type of figure that serves as an excellent springboard for introducing the thought that the savings that occur as a result of having air conditioning are frequently greater than the cost of operation."

The question might also be handled by comparing cooling with heating costs, he said, or suggesting an average figure of $100 a year for cooling and heating a $1,200-sq. ft. house, but Gonzalez cautioned, "reasonable figures have to be developed for each area since utility and fuel rates vary so considerably between communities."

Lewyt In Production

LONG ISLAND CITY, N. Y.—Alex Lewyt, president of Lewyt Air Conditioner Corp., announced that installation of a production line has been completed at the firm's plant here and built-in wall air conditioners "are now moving off the line at the rate of 500 a day."





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Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

wasn't worth what he gave me for it."

Is there a lesson in this almost incredible act of honesty? Well, let's think about it for a few moments.

Let's Get Out of the Junk Business

Did you ever see an auto dealer advertise: "$1,000 allowance on your old car" (regardless of age or condition)? Of course not.

Auto dealers are sophisticated about trade-ins, which have been a Fact of Life for them ever since (and even before) Rudy Vallee was the Elvis Presley of grandmother's generation. Auto dealers appraise every traded-in car shrewdly, adjudge the worth of its unused mileage, pay accordingly, then recondition and resell at a profit.

In contrast, our industry blatantly advertises unrealistic "blanket" allowances. ("$100 on your old refrigerator—even an icebox"). Dealers in our business dispose of trade-ins furtively, as if they were "hot."

Judging by the way we resell used room air conditioners, refrigerators, etc., it would seem that a dealer is acting like a "fence" for stolen goods.

Even worse, we are selling NEW refrigerators and air conditioners as if they were USED—on cut price appeals. Second-hand furniture and cars are sold that way. But you don't catch THOSE dealers advertising new models on price alone. THEY sell advanced features, brighter appearance, the joy of being up-to-date.

Obviously we should take a tip from automobile dealers, and sell UP our 1957 models on the basis of planned obsolescence. We should sell Pride of Possession! Next, we should pay only the true worth of any trade-in, then refurbish it for eye appeal purposes, and resell it with *pride* (and for quick turnover).

Average refrigerator being traded in today is 14 years old, but darned few families are content to drive an automobile that long. Taking a page from the auto industry's book, Frigidaire hopes to replace postwar appliance (three to 10 years old) in customers' homes, and merchandise the trade-ins to budget buyers who are short of "the ready" cash or credit.

Believing that the key to success in replacement selling is "dynamic obsolescence," Frigidaire is trying to convince every customer he is better off investing in exciting new models regularly ("planned obsolescence") than keeping his money in the bank.

This is a switch from normal dealer practice. It aims to pick up *good* used refrigerators which can be resold at a profit. Standard practice is to bid for junk. (Trade-ins more than 10 years old usually can't be resold.)

Go for Younger Models

Most dealer advertising today is designed to encourage customers to trade-in *prewar* models, which have little or no resale value. This market represents only a small percentage of the home refrigeration products in use.

In contrast, few dealers have made any effort to replace those three-to-10-years-old room air conditioners, freezers, and refrigerators — which represent the majority of such products to be found in American homes.

To establish a more uniform basis for appraisals, Frigidaire has developed a True-Value Appraisal Guide. It is a pocket-size folder with which a dealer or salesman can compute a realistic trade allowance. According to Herman Lehman, the formula is based on the age of the product being traded in, resale demand for its size and design, brand popularity, and condition of the trade-in.

Unlike "blue books" which list specific prices on products, this Frigidaire guide is designed to allow dealers leeway in adjusting for local market conditions when appraising. At the same time it provides a standard basis from which any salesman can calculate allowances.

Newlyweds Are Your First Market

The number of people who buy used appliances rather than new ones is relatively small. Most prospects shy away from used items because of personal pride. They feel they deserve the best. Another reason is that used jobs usually haven't been made physically attractive. Third reason: most folks are ashamed of dealing in the second-hand market.

Clever merchandisers at Westinghouse have worked out a scheme to overcome this lack-of-prestige hurdle in purchasing trade-ins.

Aware that the major portion of used home automation products are purchased by newlyweds who don't have adequate funds or credit to acquire everything they need all at once, Westinghouse developed a package deal for these needy-but-eager couples.

Here's how it works: a dealer offers a three-piece home group package—consisting of one new and two reconditioned appliances. The new product is a Westinghouse, of course, while the other two can be trade-ins of any make. Psychologically, this puts those other makes at a disadvantage, it is felt.

And it's a boon to newlyweds.

Dealer Associations?

Another "headache" to many dealers is over-generous allowances offered by competitors to clinch a sale. Some retailers say the answer to this problem is to pay salesmen commissions on a complete "washout" basis. That is, if a salesman accepts a trade-in at a certain price, he doesn't get paid until the used item is sold. Furthermore, his earnings are based on profits to the dealer of BOTH the new-item sale and the resale of the used job.

Losses on trade-ins come out of his commissions.

Successful dealers make an effort to appraise trade-ins according to their actual value.

Nevertheless, competitor's allowances often top these honest estimates, and become a straight price reduction on a new air conditioner, freezer, or what have you. And that's the rub.

Might not local dealer associations come up with answers to this problem?

Perhaps 10% of America's dealers do not accept trade-ins. These include most discount houses of the high-volume type, and nearly all furniture and department stores. (They learned bitter lessons.)

Sears Roebuck doesn't take trades, either. However, Sears will pay customers the cost of a classified ad in a local newspaper to move his old refrigerator. (Incidentally, many dealers testify that classified ads are the most effective way to get action on their trade-ins.)

Dealing Positively with Trade-Ins

Three or four manufacturers have offered to aid dealers by tacking *guarantee tags* on reconditioned trade-ins. Others have developed extensive plans for helping dealers sell their trades by factory-prestige type national advertising of used-and-reconditioned stuff. Such a program was inaugurated by Frigidaire, and conjoined by Kelvinator's "Verified Value" plan (started in 1944 and still going strong).

Idea here is for the manufacturer to associate his name with a used appliance without going too far out on a limb. To do that a manufacturer must teach his dealers how to put eye-appeal into the taken-in-trade goods he offers for sale AT A PROFIT.

Properly rebuilt units carry a manufacturer - underwritten warranty giving the buyer free service, a replacement for a dud, or full allowance on a new product if the used job is traded in during the short warranty period (usually 90 days).

Kelvinator reveals that the average reconditioned appliance brings $119 to the dealer, compared with $66 for an "as-is" unit. The difference more than covers costs of reconditioning. Moreover, Kelvinator officials stress, dealers can get rid of rebuilt appliances about twice as fast as they do junkers.

Along with "certified" tags from manufacturers, well-reconditioned refrigerators, freezers, room air conditioners, etc., should be displayed proudly. Too often they are hidden in a musty back room, as if the dealer were ashamed of them. No wonder prospects shy away!

If trade-ins are treated *positively*, they can increase store traffic, build up prospect lists, help pay service department overhead, and actually boost profits.

Let's get out of the junk business!

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Cast aluminum. Inner-Fin construction. No internal joints. Suction line and liquid line are separate tubes. ¼ to 10 Tons.

'CIC' CONDENSER
Cleanable tubes. Inner-Fins in refrigerant tubes for minimum size and maximum heat transfer. ⅓ to 15 H.P. Also available for marine service.

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'CR' CONDENSER-RECEIVERS
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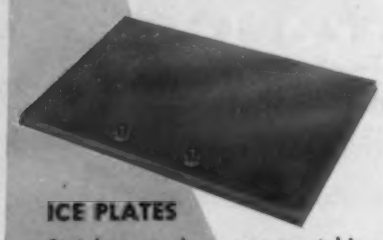

ICE PLATES
Stainless steel or copper tubing embedded in flat aluminum plate. Capacities to 40 GPH cooling from 80° to 40°.

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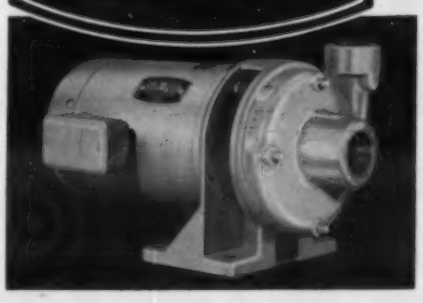

It's faster, easier, less expensive to install Sta-Rite Type AC pumps. These pumps are small, easy-to-handle. Because you can rotate the discharge outlet; there are no "fitting-in" headaches. Install—and forget service worries, too. Why? Bronze impellers; full-power motors; leak-proof seal. Best of all try this one for price.

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For more information about products advertised on this page use Information Center, page 22.

Huff Explains Refrigerated Case Functions

Blower Coil Equipped Meat Case Seen To Hold More Even Temperature, Eliminate Gravity Coil Drip, Keep Items Moist

SAGINAW, Mich.—If proper case temperatures are maintained, a blower coil will not, of itself, dry out the meats displayed, W. E. Huff, assistant service manager for McCray Refrigerator Co., Inc., advised refrigeration servicemen here.

Talking before the eighth annual convention of the Michigan Association of the Refrigeration Service Engineers Society, Huff claimed that a blower coil equipped service meat case holds a more even temperature and eliminates drip from gravity coils.

Huff said that if the coil will maintain 33° F. at the bottom of the display pans, it will bring the meats down to about the same temperature. With the meat at approximately 35° F., and the air above it at approximately 39° F., natural condensation will keep the meats moist.

But, if the temperature at the bottom of the display is allowed to rise to 35° to 39° F., case temperatures will rise above 45° F. This is much too warm and will cause the meats to dry out, he said.

Gases May Cause Meat Discoloration

Discoloration and apparent drying of meats is often caused by gases in the atmosphere, he warned. An open gas flame or an improperly vented gas heater in the store, or a leaky chimney flue, may be the real culprit.

Untreated sawdust in the walk-in cooler can also cause meats to discolor and develop off-tastes, he advised, even before they are put in the display case.

Triple-duty service cases with the open self-service front will not function properly with air drafts from the store playing over the self-service section. To correct this, make sure that no store drafts are passing over the case at any time, he said.

To keep temperatures down to the proper level, Huff recommended that the case be operated with a fully flooded coil. He recommended a 3° F. superheat setting on the expansion valve to accomplish this.

How To Set Defrost Cycle

To properly set the defrost cycle, he suggested that a thermometer be hung from the wire rack so that it is about 5 in. into the case. Then cut out the compressor at 33° F. on the thermometer and in again at 36° F. on the thermometer.

Before cutting the compressor in, however, a visual check should be made to see that all the frost is off the coil. As soon as it is, the machine should be cut in.

Since the cut-in bulb on the dual temperature control is fastened to the coil, and provided the cut-in is set properly to start with, a premature cut-in will be eliminated, thus assuring a complete defrost each cycle.

On the single-duty cases where a pressure control is used rather than a temperature control, the cut out point should be at 16 lbs. back pressure and the cut in should be at 35 lbs.

Huff noted that setting the control should always be done with the display pans in the case. Try to keep the butcher from putting paper under the pans, since doing this will disturb the air flow and will also tend to insulate the pans.

Turning to the electric defrost cycle on McCray's low temperature self-service cases, Huff explained that it was time initiated and pressure terminated. Heat is provided by two "Chromolox" strip heaters on the 8-ft. cases and three strip heaters on the 12-ft. cases.

The strip heaters are rated at 750 watts each. They are equipped with three leads at the terminal block. For ice cream cases, where a faster defrost is needed, two of the leads can be hooked together to provide 1,500 watts of heat.

During the defrost cycle, the fan motor continues to operate, forcing warm air over the coil and up the flue at the rear of the case. The air then flows over the product and down the return flue in the front of the case, clearing frost from all of these areas.

A serviceman in the audience reported that the normal 45-lb. pressure setting did not get all the frost off the packages in the case or in the return flue. Slush from the return flue would slide into the fan, stopping it.

Huff suggested that he put a thermometer in the return flue. When the air rises to 55° F., all frost would be removed. But the serviceman should check to see that it was. Then he should set the pressure switch for the pressure equivalent to that temperature.

Defrost Cycle Should Run '25 to 35 Mins.'

It should take no more than 25 to 35 minutes to complete the defrost cycle, he declared. He recommended no more than two defrost cycles per day because every cycle brings the food in contact with abnormal temperature conditions. Defrost as seldom as possible, he urged.

What will happen to ice cream on a cycle of that duration, he was asked.

Nothing, he declared. Actually, the temperature will be above freezing for only 10 minutes.

With a -40° F. coil, it will take about 20 minutes for the temperature to rise to 32° F. It will stay at 32° F. for another 10 minutes while the latent heat is removed. Then the air temperature will rise rapidly to 55° F., when the compressor will cut in again, he explained.

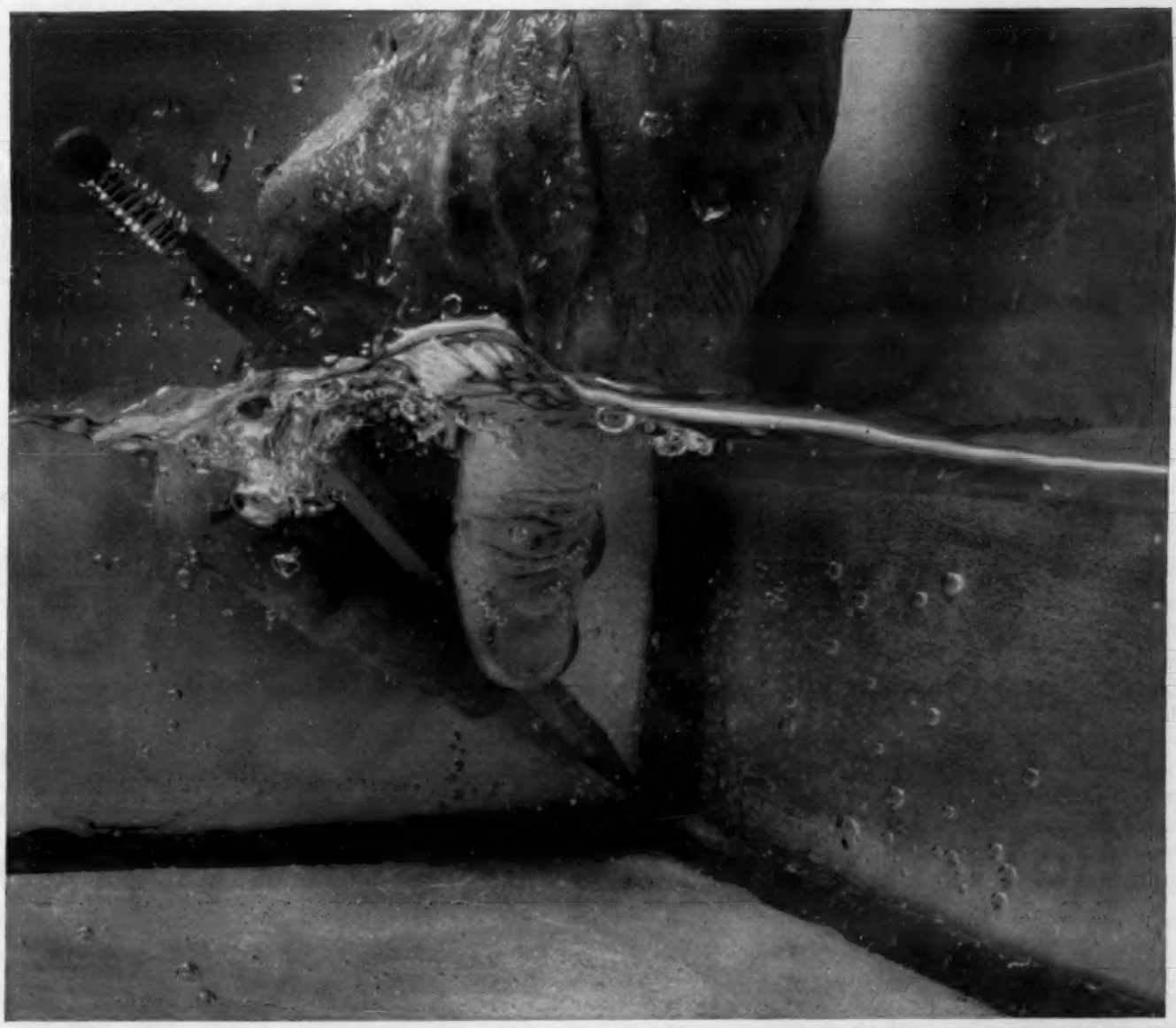
Will the strip heaters have any effect on the bottom layer of ice cream packages? another serviceman asked.

No, Huff said, the display floor of the case is well insulated and the heat will not penetrate.

Is there any safety device on these strip heaters?

Yes, Huff answered, a protective switch in the rear flue cuts out the heaters when the flue temperature reaches 65° F. It doesn't cut in the compressor, however. So the owner will be calling for service right quick. Then the serviceman gets a chance to check out the trouble before any damage can be done to the unit.

Even under water
EC-373 seals stay moisture-tight



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Exceptional water resistance?

EC-373 has it. *This 3M sealer locks seams moisture-tight*, guards air conditioner efficiency completely.

In fact, even after 500 hours submerged in a 140°F. detergent solution, EC-373 adheres tightly to metal, seals without leaking. What's more, EC-373 stays elastic but firm despite −25°F. cold or +250°F. heat. Vibration can't break this tough, flexible sealer.

The result—a leak-proof, lasting seal that keeps insulation dry, prevents freeze-ups or water seepage onto the floor.

And you can apply EC-373 fast and easily by pressure gun, flow gun, hand caulking gun, brush or spatula. There's no sag.

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"Put it before them briefly so they will read it, clearly so they will understand it, forcibly so they will appreciate it, picturesquely so they will remember it, and above all accurately so they will be guided by its light."—*Joseph Pulitzer.*

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by Jimmy Hatlo

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HE'S GIVIN' US THE EVIL EYE! OVER AT SHIFTLESS GEAR THEY CALLED HIM RAG MOP-HE CLEANED OUT THE JOINT BEFORE HIS SEAT WAS WARM...
ME-I'M TAKING TO THE LIFEBOATS NOW! I WAS THE FIRST ONE TO GET HEAVE-HOED WHEN HE TOOK OVER AT TARNISHED STEEL...
EVERYBODY'LL BE IN THE BREAD LINE EXCEPT THE TERMITES-THEY'RE HIS BLOOD RELATIONS...
THANX AND A HATLO HAT TIP TO MAX REED, PEARSON HOTEL, DANVILLE, ILL.
JIMMY HATLO
3-25
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Space Heating By Electricity Is Incubating Encouragingly

WHEN THE WRITER was a boy, wood and coal were the chief fuels for residential and commercial heating. By the time he arrived in high school, gas and oil had supplanted them. In his college days small electric bathroom heaters had appeared. But everybody said that costs of heating an entire home electrically were too great ever to be commercially practicable—in competition with gas, oil, and coal.

And for electricity to be utilized in heating even larger areas, such as stores and homes, and schools and factories—private and public utilities either would have to lower their charges, it was agreed, or some radical new invention would be needed.

This situation has held true ever since. However, today there are signs of cracks in that theory. Entire homes and shops now are being heated electrically—by means of ceiling, wall, and baseboard panels. Operating costs are relatively high, to be sure. Offsetting factors: no soot, dirt, flames, fumes, or odors. Safety is enhanced, and cleaning bills reduced drastically, anywhere that electric heat is installed.

It may be surprising to subscribers when we reveal that some 28,000 new homes were equipped with electric-resistance heating systems last year. Furthermore, a national total of 220,000 electrically-warmed homes (excluding heat pumps) are operating today, we are informed. Predicted for 1958: a grand total of 300,000 homes heated solely with presumably expensive all-electric installations. Obviously there is more to this development than meets the eye of the average contractor.

What's going on? A clue can be found in the less-obvious rise of the commercial market for "resistance-type" heating. As of now, these all-electric heating installations in stores, schools, etc., are said to number approximately 24,000. Not an impressive total, BUT:

In this sphere electrical resistance heating can be competitive cost-wise.

And because installers of commercial electric heating systems make a profit on them, sometimes they shave prices on residential installations, just to get a foot in the door. Commercial installations make sense. For example:

A complete, efficient, all-electric heating system recently was put into operation in a Hartford City, Indiana, high school. Extra insulation was installed, window glass area was set at a minimum. Independent heating units were placed in every classroom—each with its own controls.

According to architects' calculations, the saving in first cost (due to elimination of boiler room, etc.) amounted to approximately $60,000. Other savings realized included:

(1) Extra efficiency because a heat source was located at each point of heat use.

(2) Heat gains from people, lights, and appliances are maximized.

(3) Operating costs of the equipment remain constant, even at partial load (in contrast to conventional heating systems).

(4) During the night no steam pressure is required. Hence, no accompanying heat loss through piping and up the stack, and so no fuel is wasted during the night.

(5) Reduced power rates for volume use can be enjoyed, because the installation's peak power load occurs between 6 a.m. and 8 a.m. (the warm-up period). This time-of-day earns cheaper off-peak rates from the electric utility.

To sell electric heat to homeowners a contractor will need to emphasize assured comfort, tied to convenience and cleanliness, in order to obviate higher fuel costs. To sell this triple-faceted service to new home buyers he must persuade the builder and architect to go along. The latter want to know something about the "how to" of electrical heating, and want to see workable heating plans. In this connection, builders soon learn that electric resistance heating eliminates the need for a chimney. Thus they gain additional space inside the house, and save the cost of laying chimney brick and mortar.

Almost every electric utility should be vitally interested in resistance heating. It presents a new market for business growth and better service to customers. Furthermore, the characteristics of load growth, in areas of the nation which are affected by the increase of air conditioning, are causing a shift from winter to summer peaks. Thus it becomes essential to build compensating winter-time load on the part of most electric utilities.

Municipal electric systems and electric cooperatives have been more active in electric resistance heat promotion than private power companies, though. The City of Chattanooga, for instance, has the largest single concentration of completely electric resistance heated homes in America. Already it has more than 25,000 on its lines (36% saturation) and—through continued promotion—expects to add 3,000 more next year. Knoxville, Tenn., serves more than 16,000 electrically heated homes.

Other large municipals which boast more than 1,000 resistance-heated homes include Seattle, Tacoma, Memphis, and Sacramento. These home-town promoters' promotional heating residential rates vary from a high of 2¢ per kwhr. to a low of 4 mills. Lowest rates are offered by Tennessee power suppliers.

Electric resistance heating obviously needs utility support to get going in a big way. However, it's growing all by itself, and already is a factor in the heating business.

That name "resistance heating" could be a psychological handicap, though. Can't some bright advertising copywriter come up with a synonym which would checkmate buyer resistance?

From where I'm sitting tolerance is just a big word for peace. War can't get going where there's a sympathetic understanding of nation for nation, man for man, and creed for creed.—BING CROSBY.

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Addition of 3 Walk-In Coolers, More Refrigerated Display Cases Alleviates 5-Year-Old Market's Overtaxed Facilities

LINCOLN, Neb.—New developments in merchandising of refrigerated foods and increased patronage, which overtaxed facilities considered entirely adequate just five years ago when the supermarket was built, have been solved at Leon's Food Mart, 2200 Winthrop Rd., by building a 40 by 80-ft. addition with three walk-in storage coolers underneath.

Proprietor Leon A. Adelson noted that when the supermarket was constructed, refrigeration and other facilities were deemed comprehensive enough to meet anticipated needs "at least for a decade." Included were 174 lin. ft. of refrigerated self-service display cases plus a large storage layout.

Refrigerated Storage Put at Street Level

All refrigerated storage was installed at street level. The merchant believes in having the meat pre-packaging operation in full view of customers. His meat section was located at the back of the 67 by 112-ft. floor.

Operation was started with 20 lin. ft. of cases assigned to service meats and 24 ft. to prepackaged self-service. A wall alcove back of the service meat section houses the prepackaging room. Customers may view the operation behind a glass riser.

Back of the meat department and separated from the prepackaging area by a partition with two wide doors is the storage vegetable preparation section. Facilities include a 20 by 12-ft. walk-in cooler for meats, an 8 by 10-ft. walk-in for vegetables, and a walk-in of about the same size for dairy products.

Most of the refrigerated equipment was supplied by C. V. Hill & Co., Inc. A Hill sharp freezer for frozen foods storage was part of the original equipment. All cold storage facilities were close to the loading dock, thus minimizing thawing and extra steps, Adelson said.

Vending and storage facilities had their refrigeration units housed in two banks in the basement. Two small self-contained units were the exception. Latter included a coin-operated vending machine for soft drinks and a small case for frozen juices or specialties which could be moved about the floor.

Eleven Copeland compressors in the basement served the various main floor vending fixtures. Eight of these were mounted in one bank for convenience in servicing. Three larger compressors for storage refrigeration were located in another row directly below the walk-in coolers, it was explained.

Problem of meeting new frozen food demands and serving a larger clientele caused Adelson to reappraise the situation in 1956. The addition was needed both for additional refrigerated vending cases and to accommodate increased patronage. It was completed late in 1956 and enabled him to add three new "Spee-dee" checkout counters, bringing the total to seven.

Adelson changed his mind about maintaining all refrigerated storage at street level. Beneath the new addition he installed three walk-in coolers, each 10 by 40 ft. located side-by-side. A bank of three Hussmann compressors, each of 5-ton capacity, was installed near the coolers.

The merchant explained that the cost of the new addition, including the three walk-ins, additional refrigeration equipment, and a 500-lb.-capacity electric elevator, was about $100,000. Extending the addition at ground level to accommodate the walk-in coolers would have cost another $10,000, he figured.

The footing would have had to be sunk, regardless of whether the underground space was utilized for refrigerated storage or not, he added. Also, keeping refrigerated storage at street level would have cut down on customer parking space and necessitated relocation of the loading dock. The latter would have meant a longer haul from dock to cold storage.

The new electric elevator of the dumb-waiter type, coupled with an existing automatic conveyor system, is proving entirely satisfactory in moving frozen foods and similar perishables from the dock to the new basement refrigerated storage, he said. A leg of the conveyor system was extended to run in front of the new locker. The 67 by 112-ft. original basement still is used for storage of dry groceries, paper goods, etc., plus housing the refrigeration equipment.

Tenney overhead fan-type coils were installed in each of the new basement coolers to conserve storage space as well as assure proper circulation and cooling.

One walk-in is a freezer for storage of frozen foods. Another is for meats, and the third for general cold storage. All of the original cold storage facilities on street level continue in use.

Has 2 Cooling Units

Original air conditioning equipment for the supermarket included a 20-ton McQuay compressor housed in the basement. Cooled air is distributed through the same ducts as the gas-fired furnace air. Another 10-ton central air conditioning unit has been added in the basement to take care of the added selling space, it was pointed out.

New refrigerated vending fixtures installed in the new addition were made by Hill for the most part. A 12-ft. Hill unit vends bacon and ham. A 16-ft. three-shelf case is used for dairy products. A 24-ft. two-shelf unit with slanted backbar mirror displays additional dairy products.

A Freez-Rite 5-ft. case has been installed exclusively to hold eggs. It is a deep box to permit stocking of a maximum number of cartons. A platform inside the box raises as the cartons of eggs are sold out, thus facilitating self-service shopping, Adelson pointed out.

A 5-ft. Hill case is used for gift cheese packages.

Refrigerated display arrangement in the original section of the supermarket now includes nine 12-ft. Hill cases for frozen foods, ice cream, and frozen juices. A 5-ft. Tyler case is used for tinned hams, glass-packed meats such as pickled pigs feet, etc. There are 60 ft. of Hill vegetable and fruit display cases with enclosed cold storage underneath.

NEW underground walk-in coolers in Leon's Food Mart have Tenney overhead fan-type coils which are said to assure proper circulation and cooling.

There are now 32 lin. ft. of enclosed display cases for meats and 30 lin. ft. for self-service meat cases. These are all in line at the back of original section, and in front of the open-view meat pre-packaging department.

Three Copeland compressors with an 11-ton capacity total were added to serve the new refrigerated display cases. The compressors are in one bank near the new walk-in coolers.

Adelson stated that a short wire lead from compressor to refrigerator is necessary for most efficient and economical operation, especially with larger facilities. His basement compressor layout was planned with this in mind.

A feature of the new addition is a mural in bright colors. It depicts farm and river scenes which show cattle, hogs, sheep, chickens, ducks, fish, lobster, and shell fish. In the foreground is a large butcher's block on which are shown a dressed fowl and pig.

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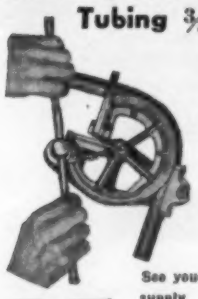

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Mitchell Offers Room Unit Dealers Hot Item Dispenser, 'Hospitality Center', To Put Customers In 'Buying' Mood

CHICAGO—Called the "Hospitality Center," a new retailing service "that puts the customer in a buying frame of mind" is being offered to dealers by Mitchell Mfg. Co.

An automatic electric "Buying Break Beverage Bar" which individually dispenses instant servings of coffee, tea, hot chocolate, and soup, is the heart of the Mitchell Hospitality Center.

Retailing Service For Promotions

"Including accessories and display material, the Hospitality Center would retail for $96.40, yet it is an exclusive and unique packaged retailing service designed especially for the promotions," according to the announcement. There are 721 items in the package.

Howard Haas, vice president in charge of advertising and sales promotion of Mitchell's room air conditioner division, said the Hospitality Center is free to all Mitchell dealers when they order a minimum number of 1957 units from their local distributor.

The Hospitality Center, it was explained, "is designed to accomplish these specific goals that help the appliance dealer become a more effective retailer:

Specific Goals

"Create a relaxing, friendly atmosphere in which to talk to customers; put the customer in a receptive-to-buy frame of mind; bring old customers into the store to see the new appliances; give the customer something to do if she has to wait for a salesman during a busy period; give the salesman an opportunity to suggest additional purchases while writing up the sales order over coffee; keep the salesmen in the store for coffee breaks; build goodwill among customers and a reputation for dependability and service; and attract attention to the neighborhood."

How Unit Works

The plug-in beverage bar holds 1½ gals. of hot water. The initial package which the dealer receives with the dispenser includes: 144 individually packaged servings of coffee, tea, hot chocolate, or soup; 200 paper cups; 200 paper napkins; two dozen turquoise plastic spoons; a creamer and pitcher; dehydrated cream and sugar.

In addition, the dealer receives an attention-getting two-color "Day-Glow" sign to identify his "Hospitality Center" and 100 post cards to send to his customers.

The post cards read: "We invite you to come in and take a look at the changes in the new 1957 appliances now available in our store," and states that the customer is under "no obligation" to buy.

Dealers can re-order additional individually packaged servings from their distributors.

Stockholders May Buy Remington Room Units Under Discount Plan

AUBURN, N. Y.—A stockholder purchase plan for 1957, under which Remington Corp. shareholders may purchase room air conditioners manufactured by the firm "at substantial discounts, and in amounts based on the number of shares they hold," has been announced by Herbert L. Laube, president.

In a letter to stockholders, Laube said, "Our stockholders will become better boosters of Remington air conditioning if they have the opportunity of sampling it personally. Therefore, we are prepared this season to sell every stockholder, for his personal use, one Remington air conditioner at wholesale prices for every 100 shares or fraction thereof that he owns."

This arrangement enables even the smallest stockholder to try out the company's products on conditions as favorable as those applying to the larger stockholder, it was pointed out. At the present time, the firm has some 1,100 stockholders of record.

Remington has established an allowance of $10 per unit which will be paid direct to Remington dealers who participate in this program. This payment is above and beyond the normal installation charge and first-year labor warranty which will be paid to the dealer directly by the shareholder. Remington's standard five-year warranty applies to all units purchased under this plan, it was stated.

FLEXIBILITY of Philco's new three-tier display rack for room air conditioners is shown here. The first two racks, from the left, show the display piece with the selling demonstration piece mounted. Farthest left rack shows the area of window used for mounting the unit. Second the competitive statement. Far right rack shows the three tiers used to display three models.

Wholesaler Opens Branch

BALTIMORE—Roche & Hull, Inc., refrigeration and air conditioning parts and supplies wholesaler here, recently announced opening of a new branch at 111 W. First St., Hagerstown, Md.

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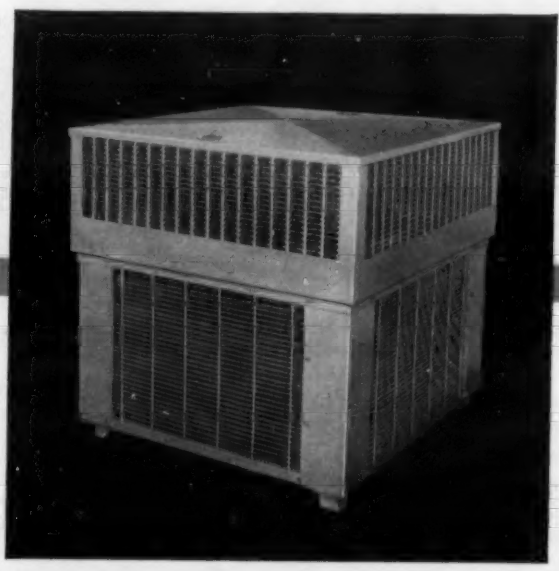
on every 2, 3, and 5-ton job with these

McQuay **TWO UNIT AIR CONDITIONING SYSTEMS**

OUTDOOR AIR COOLED CONDENSING UNIT REQUIRES NO WATER

Mount this new McQuay unit anywhere outdoors adjacent to the foundation—on the porch, in the breezeway or even on the roof. Controls are indoors.



These new air cooled two unit McQuay air conditioning systems will put you way out in front of your competition on every 2, 3, or 5-ton job. Extremely quiet and highly efficient, they are low in cost and versatile, so that you can meet any specifications on either new installations or on existing jobs. McQuay cabinets are bonderized and attractively finished in baked on hammertone gray enamel. Remember, only McQuay has the exclusive ripple-fin coil construction, and McQuay Means Quality. If you haven't already done so, investigate these McQuay two unit air conditioning systems and put yourself out in front of your competition. Representatives in principal cities or write McQuay Inc., 1607 Broadway St. N.E., Minneapolis 13, Minnesota.

AIR COOLED CONDENSING UNIT

This new McQuay outdoor type condensing unit with built-in hermetically sealed compressor is available in 2, 3, and 5-ton capacities to match each of the McQuay evaporators shown at the right. Air cooled, this unit is extremely flexible and can be installed anywhere outdoors. It is compact, efficient, quiet in operation, has exceptionally high capacity and requires no water. An indoor control panel and hi-lo safety control are furnished.

McQuay Means Quality

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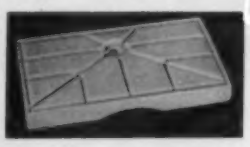

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For more information about products advertised on this page use Information Center, page 22.

Receive Brand Names Foundation Awards

AWARDED Brand Names Foundation's 1956 Brand Name "Retailer-of-the-Year" plaque was G. A. Bering, Sr. (l.), Mechanical Engineering Corp., Norfolk, Va. "Certificate of Distinction" runner-up honors went to Joseph H. Lederer (second from l.), Lederer, Inc., Bridgeport, Conn.; Marjorie Gerhard, Gerhard's, Inc., Glenside, Pa.; and Stuart Greenley, Greenley's, Inc., Flint, Mich. Also honored, but not shown, was Ken Stucky, Stucky Brothers, Fort Wayne, Ind.

Men on the Move . . .

Borg-Warner Corp.—ROBERT W. MURPHY, vice president and general counsel, has been elected chairman of the executive committee to succeed G. A. SHALLBERG, SR., retired.

GEORGE P. F. SMITH, assistant to the chairman of the board in charge of the New York office, has been named a vice president and will take charge of the Washington, D. C. office. He succeeds KARL AMMERMAN, retired.

Olin Mathieson Chemical Corp.—First top management changes since the firm was formed in 1954 from the merger of Olin Industries, Inc., and Mathieson Chemical Corp. have been made.

JOHN M. OLIN, board chairman and executive committee chairman, becomes chairman of the financial and operating policy committee and will continue to serve as chairman of the executive committee.

STANLEY de J. OSBORNE, executive vice president in charge of foreign operations and vice president for finance, has been named president and chief executive officer.

THOMAS S. NICHOLS, president since the merger and formerly president and chairman of Mathieson Chemical Corp., was elected chairman of the firm.

JOHN W. HANES, retired, who has been finance committee chairman, was appointed financial consultant and a member of the financial and operating policy committee. He continues as a director.

Barber-Colman Co.—Expansion of the sales and service facilities in seven cities has been announced.

BERYL M. JOHNSON has joined the service staff at Columbus, Ohio.

J. RICHARD MANIER was assigned to the Cleveland sales engineering staff.

CLEMENS MATULA joined the Chicago sales engineering staff.

OTTO SCHEMMEL has been added to the service engineering staff in Chicago.

MARION L. JONES has joined the Grand Rapids, Mich. service engineering group.

LLOYD J. AUSTIN has been added to the Los Angeles service engineering staff.

GEORGE F. DRAPER joined the service engineering staff of Barber-Colman, Ltd. in Toronto, Ont., Can.

JAMES P. WHITEHEAD, former sales engineer of the Toronto office, has been named Wheelco branch sales manager of Barber-Colman, Ltd. in Montreal.

Mathes Air Conditioning Co. (Fort Worth, Texas)—Appointment of GEORGE MALSED as regional manager for the Ohio-Michigan area has been announced. He will operate from Columbus, Ohio.

Eureka Williams Co.—Appointment of WALTER C. OLSEN as advertising manager for the Williams division has been announced. He will plan and administer the advertising and sales promotion program. He formerly was with A. O. Smith Corp. and Admiral Corp.

Electric Auto-Lite Co.—GURDON W. WATTLES was elected a director.

L.O.F. Glass Fibers Co.—One sales representative has been reassigned and two others added to the firm's staff.

JOHN M. VANSELOW, formerly field representative in the Philadelphia area, has been transferred to the southeastern region. He replaces J. WALTER WHITACRE, resigned.

JAMES W. HUNTER, formerly associated with Mundet Cork Corp., has been assigned as field representative in the Philadelphia area.

WALTON H. STAHL has been appointed to the southwest region, operating from Houston, Texas.

ROGER L. RUMMEL, management trainee, has been assigned as an assistant in customer service.

Fulton Sylphon Div., Robertshaw-Fulton Controls Co.—Appointment of JAMES D. CRUM as sales engineer in the Baltimore office has been announced. He formerly was applications engineer in the division's headquarters.

Tubular Products Div., Babcock & Wilcox Co.—JAMES S. ANDERSON, formerly general sales manager, has been elected vice president-sales.

Rheem Mfg. Co.—G. W. MALLATRATT, vice president and treasurer, was named a director.

GEORGE A. LANGENBERG has been named national product manager in charge of wet heating systems for Home Products Div. He will develop sales of gas and oil-fired steam and hot water heating boilers. He has been manager of Burnham Corp.'s Chicago branch.

Johnson Service Co.—Retirement of FABIAN C. McINTOSH as manager of the Pittsburgh branch has been announced. He has been succeeded by EDWIN A. SMITH, formerly assistant manager.

Century Electric Co.—DONALD R. VICK, who joined the firm in March, has been named manager of the newly-opened branch office in Portland, Ore.

Westinghouse Electric Corp.—ROGER H. BOLIN has been appointed advertising director, a newly-created position. He was general advertising manager.

General Purpose Control Dept., General Electric Co.—WALTER N. SHAMBACH, manager-device production engineering, has been named manager-original equipment manufacturing and intra-company sales.

Wolverine Tube, Div. of Calumet & Hecla, Inc.—GEORGE E. READE, formerly supervisor of wholesaler sales in the general sales offices in Detroit, has been appointed sales representative in the Chicago area. He will headquarter in the Evanston offices.

St. Joseph Div., Whirlpool Corp.—Appointment of G. JAMES ALABACK, previously engineering director for the Marion (Ohio) division, as engineering director has been announced.

...IN FRONT

+ = Air Conditioning

WITH PLENUM INSTALLATION

The McQuay vertical "RE-V" type evaporator is mounted in the furnace bonnet or plenum chamber and utilizes the furnace blower. It is suitable for all types of forced warm air furnaces, including counterflow. Available in 2, 3, and 5-ton capacities to match the McQuay outdoor condensing unit. High capacity, highly efficient, with McQuay ripple-fin coil construction, fiberglas insulated. Service panel and space for internal valve mounting is provided. Drain pan for collection of coil condensate is built-in.

ONE OF THESE
McQuay
SYSTEMS
WILL FIT YOUR
AIR CONDITIONING
NEEDS!

+ = Air Conditioning

WITH DUCT INSTALLATION

The McQuay horizontal "RE-H" type evaporator is mounted in the duct of forced warm air systems and likewise uses the furnace blower. It is extremely compact and highly efficient due to McQuay ripple-fin coil construction. Also built in 2, 3, and 5-ton sizes. Thoroughly insulated with fiberglas. Service panel and space for internal valve mounting is provided. Drain pan for collection of coil condensate is built-in.

+ = Air Conditioning

WITH REMOTE INSTALLATION

This blower evaporator is designed to use its own independent duct system, or for use where no ducts are required. Available in 2, 3, and 5-ton capacities, it is suitable for existing forced warm air systems lacking sufficient air capacity in residential or small commercial jobs or in new systems. Ceiling mounted, requires no floor space. Fiberglas insulated, and with drain pan for collection of coil condensate built-in.

AIR CONDITIONING
HEATING
REFRIGERATION

McQuay INC.

SOLDERS, FLUXES

Part 1—Types and Characteristics

By Frank J. Versagi
Mueller Brass Co., Port Huron, Mich.

Every time you solder a joint, you are making use of some of the basic principles of chemistry and physics. Knowledge of these principles behind fluxing, cleaning, and joint strength will enable the serviceman to determine why the basic techniques in soldering have been adapted and to determine which can safely be altered or ignored in practical work.

There are three primary techniques used to join metals—soldering, brazing, and welding. In welding, of course, the edges of the two pieces to be joined are actually fused or melted to form the joint; the temperatures are very high, on the order of 2,500° F.

In soldering and brazing, the base metals are not fused at all. Instead, another metal is melted and used to make the joint. The soft solders melt in the 350° to 475° range, while the brazing alloys melt around 1,200° F.

Later we will survey the popular solders and brazing alloys; first we will see what basic properties such alloys must have in order to fulfill their function.

If we immerse the end of an iron tube in molten lead, we can coat the tube with a thin layer of lead. If we heat the iron tube, we can completely melt and wipe off the lead exposing the original surface.

If we immerse the end of an iron tube in some melted 50-50 solder, the tube will become coated with solder. When we heat this tube, however, we find that we cannot completely wipe off the solder. The surface of the iron remains covered with a very thin layer of solder.

Key To Strength of Soldered, Brazed Joints

This ability to "wet" the base metal is the most important single property of solders and brazing alloys. It is the key to the strength of the soldered and brazed joints.

While the molten lead can join itself to iron and other metals mechanically, it does not have the ability to become one with the base metal, and the lead can be mechanically pried off or otherwise removed. For this reason, a leaded joint would have very little strength beyond that of the lead itself.

Because solders and brazing alloys form a chemical type bond (with interatomic forces involved) with the base metal, the joint becomes stronger than the solder or brazing metal itself. This bonding strength is the chief force holding the joint together.

In all cases, the bonding strength is stronger than the melting metal; in some cases, it may be stronger than the metal being joined.

Dramatic Demonstration

One soldering demonstration I have seen dramatically demonstrates this fact. A short length of copper tube is soldered to a copper tee with soft 50-50 solder. The tee is clamped in a vise and a copper elbow is soldered at the other end of the tube. With a long handled pipe wrench, the elbow is grabbed then slowly twisted around and around. The elbow does not slip around the tube, nor does the tube slip in the clamped tee. Instead, the copper tube twists until it breaks, and the soldered joints remain intact.

Similarly, a joint brazed with a brazing alloy whose tensile strength is 70,000 p.s.i. has been known to withstand a stress of 120,000 p.s.i.

This ability to create a strong joint depends greatly on the ability of the melting alloy to wet the surface of the base metals, and the ability to wet depends in turn on such factors as the alloy itself, the clearance between mating members, cleanliness, and fluxing. We will see the reasons each of these factors must be considered in normal soldering technique.

Melting Range Important

Obviously, the melting alloys must melt at temperatures low enough so that joints can be made without undue difficulty. Not only the melting or softening point, but also the melting range is important, especially in large joints or where component parts are being joined in a furnace as part of an assembly operation.

This melting range or plastic range of temperatures through which at least part of the alloy is molten and will flow depends on the composition of the alloy and can be changed easiest by changing the make-up of the alloy.

In certain cases, the chemical composition of the melted portion may differ greatly from the unmelted portion. Depending on the end use, this situation can be either a disadvantage or an advantage.

Typical Solders and Brazing Alloys

Name	Composition	Melting Point ° F.	Flow Point ° F.	Plastic Range ° F.
Sixty-Forty Forty-Sixty	60% lead 40% tin	358	448	90
Fifty-Fifty	50% lead 50% tin	358	414	56
Ninety-Five-Five	95% tin 5% antimony	450	465	15
QQS 561d Class 3	15% silver	1185	1300	115
Silver Brazing Alloy	80% copper 5% phosphorus			
Silver Solder	45% silver 15% copper 24% cadmium 16% zinc	1120	1145	25
Phos Copper	95% copper 5% phosphorus	1300	1300	0

The significance of a narrow or wide plastic range is explained in the text.

Let's examine a couple of illustrations: Pure lead melts at 621° F.; pure tin melts at 450° F. As tin is added to lead, the alloys formed have lower melting points than lead.

Generally speaking, these alloys do not have a sharp melting point. Instead, there is a plastic range which extends from the lowest temperature at which part of the alloys melt until the highest temperature where the entire alloy is molten.

Fifty-fifty solder, for example, begins to melt at 358° F. and is completely molten at 414°—a difference or plastic range of 56°.

Forty-sixty solder (40% tin, 60% lead used in times of tin shortages) also begins to melt at 358°, but this alloy is not completely molten until 448°—a plastic range of 90°.

When partially melted, the fluid portion will have a different composition than the still solid portion. Charts exist which allow us to determine the exact make-up of each phase, solid or liquid, at each temperature. Tradesmen often refer to the lowest point at which melting starts as the melting point; the point at which the entire alloy is molten is called the flow point.

There is a definite composition at which the alloy of lead and tin acts as a pure metal, melting at a single temperature. This alloy, 61.9% tin and 38.1% lead, is called the eutectic alloy. When this alloy begins to melt, the molten portion is the same composition as the solid portion, and the flow point and melting point are identical—about 360°.

The term eutectic alloy is not restricted to the alloy of lead and tin. It applies to any alloy of two or more metals which acts as a single metal in melting characteristics.

A silver solder containing 72% silver and 28% copper, for example, is a eutectic alloy, melting completely at 1,435°. Alloys that contain either more copper or more silver than these amounts melt over a temperature range starting at 1,435° and not becoming completely molten until a higher temperature is reached.

From the viewpoint of the servicemen, it is usually advantageous to use an alloy with a wide plastic range, since this allows ample time to completely fill the joint.

Solders with a narrow plastic range, like 95-5, become either liquid or solid rapidly and are more difficult to work with.

In other cases, wide plastic ranges can be a disadvantage.

(Continued on next page)

NOW the

888 hermetic eye*

double port sight glass

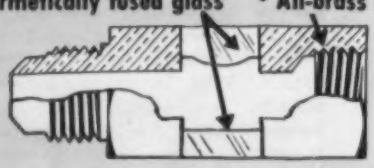
with revolutionary hermetically fused glass-to-brass construction . . . no gaskets, joints or fittings

Another great stride in leakproof refrigeration installations comes with the Superior 888 *hermetic eye double port sight glass*. Here is the perfect hermetic bonding of glass-to-brass—no gaskets, joints, solder seals or fittings.

Tested to more than 3000 p.s.i., it assures leakproof operation. Double port design for clear-through vision—the word FULL clearly visible only when system is charged with refrigerant. The special heat-resistant glass possesses high tensile strength. Available in ¼" and ⅜" male-to-male and male-to-female SAE flare.

*Trademark

Simplicity of Design
• Hermetically fused glass • All-brass body



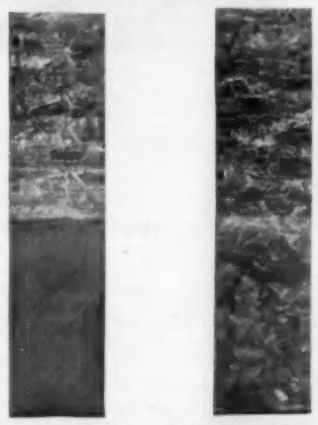
(Patents Pending)

LOOK FOR THE 888 HERMETIC EYE AT LEADING WHOLESALERS IN THE INDUSTRY

Superior *valve and fittings co.*
Pittsburgh 26, Pennsylvania

MAKE YOUR OWN SCALE REMOVER!

Galvanized strips dipped in acid solutions of equal strength.



Galvanize completely stripped in less than 30 minutes without Vapco-Hib.

Galvanize still intact after 24 hours in similar solution, but with Vapco-Hib.

with

VAPCO-HIB

ACID INHIBITOR

Just add it to muriatic acid. Gives fast, low cost descaling with unbelievable safety to metal surfaces—even galvanize!

NOW, FOR THE FIRST TIME — the low cost, fast descaling action of muriatic acid . . . with the safety of a dry powder cleaner. Vapco-Hib sets up a chemical reaction which forms a protective barrier on metal surfaces, yet does not retard cleaning action on scale deposits. Complete information and directions on bottle. Available in 8 oz. and 32 oz. sizes. Ask your wholesaler or write us today.

Other Vapco Products

• DRY POWDER CLEANER • SLIME-X
• PHOS NUGGETS • ICE MACHINE CLEANER

GARMAN CO., INC. • St. Louis 23, Mo.

For more information about products advertised on this page use Information Center, page 22.

Solders, Fluxes--

(Continued from preceding page)

For example, if pressed seam joints are to be furnace brazed and a silver solder with a wide plastic range is used, the first portion of the alloy to melt will flow away from the rest of the alloy leaving a skull of high melting alloy which may never fuse at the temperature of the furnace. In such a case, an eutectic alloy which melts completely at a single temperature is best.

In the case of a sloppy fit, the skull left from a wide plastic range can be pushed into place as a fillet or bridge over a gap. Thus, it is well to know the thermal properties of the solders and brazing alloys with which you are working.

One word of caution in this regard. Some manufacturers publish "flow points" which are not the temperature at which the entire alloy is molten, but which may be an *average* temperature or even the *lowest* temperature at which part of the alloy melts.

Generally speaking, eutectic alloys, with a narrow melting range, are preferred where the alloys is preplaced in a joint. This would apply to furnace brazing, but seldom to service soldering.

When clearances are wide, and if it is desired to build a bridge or fillet for strength purposes, alloys with a wide plastic range are better.

When joints can be pre-heated and the alloy hand-fed, as in most service work, either type of alloy can be used. In such cases, the deciding factor may be economy or end use (the severity of the service conditions).

(To Be Continued)

Cool City Hall

NEW ORLEANS—This city recently dedicated its $8 million, 11-story, air conditioned City Hall as the main event of a four-day "parade of progress" celebration.

The new City Hall will centralize the function of municipal offices now in 10 buildings.

Now Representing...

REMINGTON AIR CONDITIONING DIV., REMINGTON CORP.—**Gover & Co.,** Charlotte, N. C., has been appointed room air conditioner sales representative in North and South Carolina.

O. A. SUTTON CORP.—**Appliance Servicenter,** Natchitoches, La., has been named dealer for "Vornado" air conditioners.

YORK DIV., BORG-WARNER CORP.—**Quarles Refrigeration Co.,** Savannah, Ga., has been appointed dealer for year-round air conditioning and automatic ice making equipment in that territory.

GIBSON REFRIGERATOR CO., DIV. OF HUPP CORP.—**Cloud Bros.,** South Bend, Ind., has been appointed appliance distributor in Berrien, Cass, and St. Joseph counties in Michigan, and 13 counties in northern Indiana.

Webster Corp., Norfolk, Va., has been named appliance distributor for that trading area including eight counties in Virginia and six counties in North Carolina.

MITCHELL MFG. CO., DIV. OF CORY CORP.—**Dallman Co.,** San Francisco, has been named distributor in the northern California trading area for room and package air conditioners. The line was formerly distributed by McCormack Corp. Dallman previously handled Philco units.

TYPHOON AIR CONDITIONING CO., DIV. OF HUPP CORP.—**Peerless Pacific Co.,** Portland, Ore., has been appointed wholesale distributor in that area.

DEAN PRODUCTS, INC.—Appointment of **E. L. Burlingame** as sales representative in the New York state area has been announced. He will cover Orange, Putnam, Westchester, Rockland, New York City, and Long Island.

DRAYER-HANSON, DIV. OF NATIONAL-U. S. RADIATOR CORP.—Named as exclusive representative in southern California for the firm's refrigeration units was **C & S Equipment Co.** of Los Angeles. Air Conditioning Supply Co., Los Angeles, is sales agent for Drayer-Hanson air conditioning equipment in the area.

REMINGTON CORP.—**Don H. McQuarrie,** Havertown, Pa., has been named representative for room air conditioners in southern New Jersey, eastern Pennsylvania, Delaware, Maryland, and the District of Columbia.

C. W. Lehner Co., Atlanta, has been named representative for room units in Alabama, Georgia, and eastern Tennessee.

BARNEBEY-CHENEY CO.—**R. E. Chase & Co., Inc.,** with offices in Seattle and Tacoma, has been appointed sales representative in Washington west of the Columbia river for "PurAir" activated charcoal air purification equipment.

ADMIRAL CORP.—**Pittsburgh Products Tri-State Co., Inc.,** distributor in the Pittsburgh area, will now serve an additional 16 counties formerly handled by Electric Appliance Distributors of Altoona. The firm will warehouse merchandise and parts in Johnstown.

YORK CORP., SUBSIDIARY OF BORG-WARNER CORP.—**Providence Electric Co., Inc.,** Providence, R. I., has been appointed room air conditioner distributor.

Tenn-York Supply Corp., Nashville, Tenn., has been named refrigeration and air conditioning wholesale distributor in Tennessee east of the Tennessee river, parts of southern Kentucky, West Virginia, six Georgia counties, and two in Alabama.

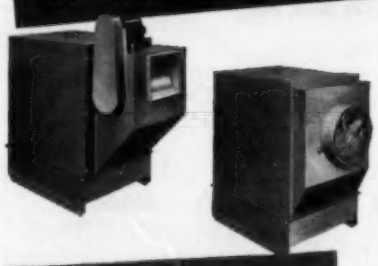
LORD & PALMER, Inc. (Belding, Mich.)—Mercury Air Conditioning & Heating Div. has named **Harris Supply Co.,** Grand Rapids, Mich., distributor of self-contained commercial and residential air conditioners and will service 30 counties in western Michigan.

Kleinman Brothers, Inc., Baltimore, has been named residential and commercial air conditioning distributor for the eastern Maryland trading area.

Famous Furnace Co., Cleveland, has been appointed distributor of air conditioning equipment in northeastern Ohio, plus some counties in Pennsylvania and West Virginia. The firm has eight affiliated companies located in Lorain, Steubenville, Akron, Warren, Newark, Mansfield, Ohio; Wheeling, W. Va.; and Uniontown, Pa.

RAPID, ACCURATE CHECKS ARE MADE ON AIR CONDITIONING SYSTEMS BY NOVI EQUIPMENT CO. SERVICEMEN WITH G-E LEAK DETECTORS

LARKIN MEANS EFFICIENT DESIGN....



LARKIN COOLING TOWER

All Larkin refrigeration and air conditioning equipment is designed to give peak performance at low operating costs, whatever the requirements. The same organization that produced the original, patented cross-fin coil maintains a constant effort for better, more efficient design. Just one more reason why Larkin leads.

•

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Air Cooled and Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers

LARKIN COILS INC.
519 MEMORIAL DR., S.E. • ATLANTA, GA.

ON NOVI CO. AIR CONDITIONING UNITS . . .

Service Costs Cut 85% with G-E Leak Detector

"85% of our service repairs on auto air conditioning units were due to loss of Freon* at a cost of approximately $5.00 per repair," says Mr. Lewis W. Welch, president of Novi Equipment Company of Novi, Michigan. "Since we adopted the G-E leak detector as a standard item in our repair kits, complaints have been reduced to almost nil. We are in the process of equipping all of our 90 factory installation centers with G-E leak detectors to assure that our customers will receive the best possible initial installation."

Like Novi Equipment Company, you can benefit from these outstanding features of the General Electric Type H-1 leak detector:

SIMPLE IN OPERATION, the detector will locate leaks in any system which contains a halogen compound, or into which such a compound may be introduced as a tracer.

EXTREMELY SENSITIVE, the detector will detect a leak as small as 1/100th ounce of Freon* a year.

LOW IN PRICE, the detector costs only $665.28** complete. For more information contact your nearest General Electric Apparatus Sales Office or write for bulletin GEC-233 to Section 585-30, General Electric Co., Schenectady 5, N. Y.

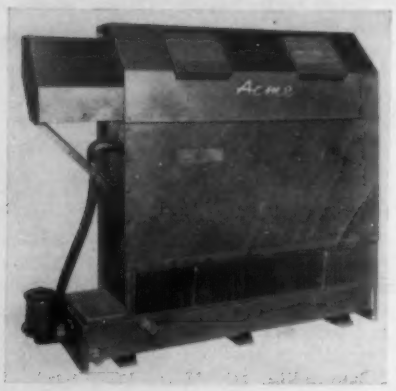
*Registered trade-mark, Kinetic Chemical Division of E. I. DuPont de Nemours & Company.

**Manufacturer's suggested retail price.

MANY APPLICATIONS are possible with the General Electric Type H-1 leak detector. Lightweight and portable, it also features audible leak indication.

GENERAL ELECTRIC

Evaporative Condenser Has Zig-Zag Coil Path



——KEY NO. G-610——

JACKSON, Mich.—A new series of "Flow-Mizer" evaporative condensers, with capacities up to 200 tons and incorporating zig-zag cross-sectional coil spacing with phenolic spaces, was recently announced by Acme Industries, Inc.

Improved turbulence and heat transfer is achieved with staggered, cross-sectional spacing of the tubes in the new units, it was stated. Water moving downward and air moving upward travel a longer, zig-zag path through the coil.

Falling spray water is kept in longer contact with the tubes in all the new Acme evaporative condensers because Acme coils are pitched to form a continuous, zig-zag slope longitudinally. This sloping also allows the refrigerant to drain more rapidly.

Water treatment is simplified with Acme's external sump, as is servicing of the sediment screen and draining the units, it was added.

Range Line Features 'High-Fashion' Look

——KEY NO. G-611——

CHICAGO—A new electric range line, featuring the "high-fashion" look and a meal sentry and roast thermometer for fully automatic cooking was recently announced by Norge Div., Borg-Warner Corp.

Four 30 and 36-in. high-fashion models in custom and standard series, a 36-in. vertical broiler range, and a 20-in. range for apartment use make up the '57 line.

The vertical broiler range, which broils meat on both sides at once, and the 20-in. apartment range have been restyled.

A meal sentry, located on the right front unit, is an automatic device which prevents burning of food, scorching of pans, overheating, and maintains precise temperature selections by means of a thermostat.

The roast thermometer causes a buzzer to sound when the meat reaches a selected temperature. A visual indicator aids the homemaker in determining the temperature setting for any piece.

On both custom and standard ranges a char-coil speed-broiler is combined with a 21-in. oven in the 36-in. models and a 24½-in. oven in the 30-in. models. A drawer mounted on nylon rollers provides storage space in both size ranges.

"A CASE OF COOL JUDGMENT"

FLO-COLD DRINKMASTER

STAINLESS STEEL CUBER — COOLER.

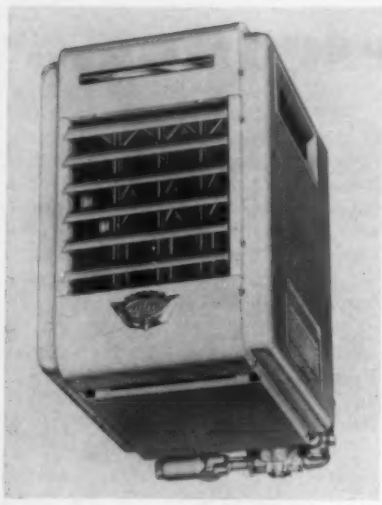
SOLD THRU DEALERS ONLY

WRITE

United Friguator Engrs.

MENOMINEE, MICH.

AVAILABLE IN SIZES 4 to 10 FT.



Unit Heater Provides Job Versatility

——KEY NO. G-612——

LOS ANGELES—Utility Appliance Corp. has announced addition of a new, compact 25,000 B.t.u. unit heater, model No. 25 UF.

Designed to provide versatility on unit heating jobs, the 25 UF is only 16¾ in. high, 10⅝ in. wide and 21 in. deep. It provides maximum headroom in restricted areas, and is encased in a modern-design cabinet that is die-formed in grey hammer-tone enamel to blend with all interiors, the company said.

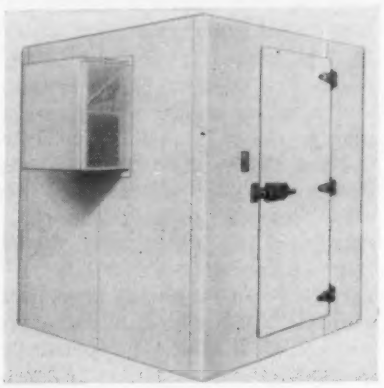
Utility engineered heat exchangers and porcelain-enameled elements are featured to guarantee maximum heating capacity and long life, and adjustable discharge louvers assure complete control of the warm air flow. The heat exchangers carry a five-year warranty. Fans are dynamically balanced, powered by a slow resilient-mounted motor for maximum air delivery with a minimum of noise.

Fully-automatic fan and limit controls are factory installed and wired, with room thermostats available as accessories. Low voltage controls eliminate expensive, permanent line voltage wiring to thermostat or control switch, and the gas valve is operated on 24 v. to allow the use of bell wire for connection of thermostats.

The unit suspends from pipe hangers, assuring quick and easy installation. Vent, gas line, and electrical connections may be completed rapidly and conveniently. Another feature is the hinged bottom pan and lighter door on the side, which simplify maintenance, it was added.

Simplified Assembly All-Metal Cooler Offered

——KEY NO. G-613——



HUDSON, Wis.—Nor-Lake, Inc. here recently began production on a new simplified assembly all-metal cooler.

With an exterior of 20-gauge cold rolled steel finished in white baked-on enamel, unit has interior paneling of galvanized sheet steel. Framing is of kiln-dried fir cross-braced for added strength, the company explained. Wood is dipped in sealer solution that makes it vermin, rot, and moisture-proof.

Cooler is insulated with permanent, self-supporting glass fiber with aluminum paper vapor barrier. Door has three ball-bearing hinges and latch is fitted with automatic inside release handle, it was noted.

"A "Plug-In Panel," containing compressor, fan, coil, and condenser in a compact unit, can be mounted on side or top of the cooler for power.

Many standard sizes are available in 90-in. heights with odd sizes and special heights available on special request.

Produces Mobile Home ¾-Ton Conditioner

——KEY NO. G-614——

CINCINNATI—The "Trail-Air," a ¾-ton air conditioner designed especially for mobile homes, will soon go into limited production, according to an announcement by Russell B. Gannon Co., Inc., its manufacturer.

An air-cooled unit, Trail-Air takes its cooling air from beneath the trailer through a 12 by 26-in. hole in the floor. The unit occupies a floor space only 28 by 14 in. and being 26 in. high, makes an attractive table for radio or lamp, the announcement said.

It is claimed that installation costs much less than for a window unit and takes only 30 minutes.

Absolute-Type Air Filter Developed

——KEY NO. G-615——

EL SEGUNDO, Calif.—Introduction of a new series of absolute type air filters has just been announced by Farr Co. here.

Filters are constructed in such a manner as to give virtually 100% air cleaning efficiency in the most critical sub-micron ranges, the firm claims. The new filters meet A.E.C. specifications and are effective in removing dust particles as small as 0.1 micron in diameter. A complete range of sizes is available with individual capacities from 30 to 5,000 c.f.m.

Construction consists of deep, closely-spaced folds of filter paper fitted into a rigid rectangular frame. The paper pleats are held securely in place by corrugated separators which permit easy passage of air. Three basic types are available, type 1 for use in temperatures below 225° F. and non-corrosive conditions, and types 2 and 3 for use in temperatures up to 1,000° F. or in corrosive atmosphere.

Filters are designed for special applications where the ultimate in air cleanliness is required. The filters are normally installed downstream of all other filters used.

"King Zeero's" Sweet Water ICE BANKS offer ICE-CONCENTRATED Refrigeration for Air Conditioning

CONTINUOUS RIFLED GALVANIZED COILS
EXPANSION VALVE CONTROLLED

32°-34° COLD ICE WATER

DESIGNED FOR USE WITH: FREON
METHYL CHLORIDE — AMMONIA

The "King Zeero" ICE BANK is designed for air cooling in Churches, Mortuaries, Theatres, Offices, Stores, Auditoriums, Factories, Clubs, Restaurants, etc. Ice Banks may be added to existing systems for increased capacity. The "King Zeero" ICE BANK is designed to deliver 32° to 34° F. sweet water for recirculation through secondary equipment. Design temperatures may be obtained with mixing valves.

MODEL A-7
"KING ZEERO"
ICE BANK

CONSIDER THESE ADVANTAGES--

- DIRECTED COURSE OF WATER travels with "built-in" agitation.
- NO MECHANICAL AGITATION REQUIRED.
- LARGE WATER COMPARTMENTS spaced on 11" and 12" centers.
- 33⅓ EXTRA ICE CAPACITY safely attained with up to 300 G.P.M. water flow.
- ICE IS "BURNED OFF" PLATE COILS progressively, exposing prime and secondary surface for maximum flash cooling capacity.
- ICE THICKNESS automatically controlled - eliminates "freeze ups."
- 94 SIZES to fit space requirements. Other designs for special applications.

CAPACITIES - 500 lbs. to 30,000 lbs. (72,000 B.T.U.'s to 4,320,000 B.T.U.'s) in a single unit. Multiple units may be installed.

THE KING ZEERO COMPANY
4300-14 W. Montrose Ave. - Chicago 41, Ill.
Manufacturers of Ice Builders - Ice Builder Cabinets - Ice Banks

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised
(list name, page, and issue date)

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What's New or Current Literature Available

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Key No. ..... Key No. .....
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450 W. FORT ST. DETROIT 26, MICHIGAN

For more information about products advertised on this page use Information Center, page 22.

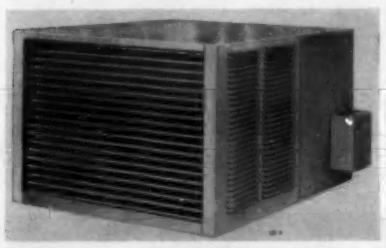
Introduces Portable Spot Merchandiser

——KEY NO. G-616——

DETROIT—A new portable spot merchandising case, CAC-3G, was recently announced here by Frank-Dewey Co., Inc.

Adapted for merchandising specialty items, the unit can specially refrigerate cheese and other dairy products for a sale, or be used continuously in the market.

Weight of the top section of the 29 by 19 by 36-in. case is 41 lbs., bottom 71 lbs. Storage capacity is 3 cu. ft. Mounted on four casters, the case is available with or without stainless steel top and tray. Display glass panels measure 10 by 28 in. and trim is stainless steel, the company said.



Offers Attic-Type Air-Cooled Unit

——KEY NO. G-617——

CEDAR RAPIDS, Iowa—Newest addition to Century Engineering Corp.'s line of air conditioning equipment is the "Coolpak," a two-stage, air-cooled unit for attic type installations.

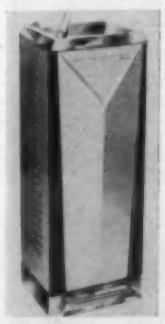
Available in 2 and 3½ hp. (22,000 and 36,000 B.t.u.), the Coolpak is suitable for residential and small commercial use, the firm said. It features twin compressors for operating economy, air-cooled condenser, squirrel cage blower and evaporator, utilizing evaporator condensate to provide cooling capacity.

The self-contained unit may be tied into existing heating ductwork or installed with pre-fabricated available ductwork of lightweight, permanent Fiberglas available in five or seven-room kits.

Water Cooler Set In Modern-Style

——KEY NO. G-618——

GLEN RIDDLE, Pa.—A water cooler set in modern style trends was recently introduced here by Sunroc Corp.



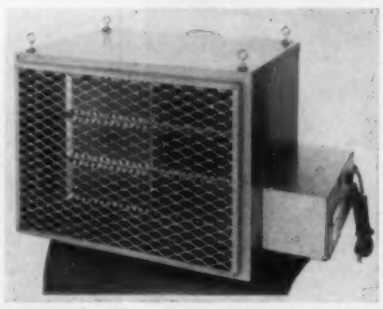
"Advanced" cabinet is gray hammertone with tapered front panel available in pastels. It features dual-control operation, is furnished with foot pedal that is lifted for cleaning, or it can be removed.

Tube-type cooling permits water to flow with self-cleaning action through copper tubes which have about a 1-gal. reserve supply, it was pointed out. Plumbing connections are concealed in the unit.

'Dustronic' Precipitator Has Two-Speed Fan

——KEY NO. G-619——

CHICAGO — Radex Corp. recently developed a completely self-contained electrostatic precipitator which collects airborne particles, including pollens, sneezes, and allergens, it was announced.



"Dustronic" is equipped with a two-speed fan and has air cleaning capacity of 800-1,200 c.f.m. Dimensions are 18 by 32 by 26 in.

Also equipped with activated carbon filters which removes smog, odors, grease, gases, and smoke, the unit has low current consumption, the company explained. It does not generate ozone, nor require water or sewer connections.

Develops Shielded Arc Braze-Welding Unit

——KEY NO. G-6110——

WHITE PLAINS, N. Y.—Utility of the metallic arc in production and maintenance operations is broadened by the availability of a general purpose shielded arc aluminum bronze electrode recently announced by All-State Welding Alloys Co., Inc. here.

The electrode can be used with d.c. reverse or high-open-circuit a.c. It is for braze-welding cast iron, malleable iron, galvanized iron, cast iron to steel, cast iron to bronze, steel to bronze, aluminum bronze, silicon bronze, or brass.

Designated "Arc-Braze No. 20," this electrode is available in ⅛, 5/32, and 3/16 in. diameters.

Filter Replacement 'Fiberscreen' Added

——KEY NO. G-6111——

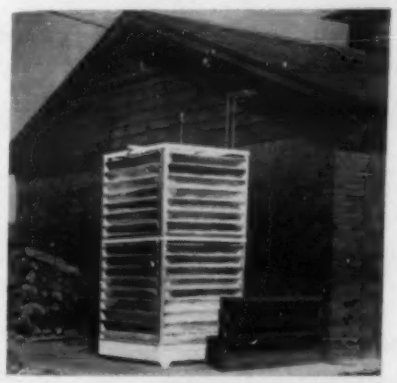
CHICAGO—Recently introduced for sale here by Fiber Bond Corp. was easy-cut "Fiberscreen," an improved one-size filter replacement material to fit all size and model room air conditioners.

Scientifically produced by bonded "Dynel," acrylic fiber made by Union Carbide Corp., the new filter is designed for easy handling and cutting to size, and is said to last a long time and filter air efficiently. It has a stiff cotton mesh backing, needs no frame.

Cooling Towers Made Bolt-Free

——KEY NO. G-6112——

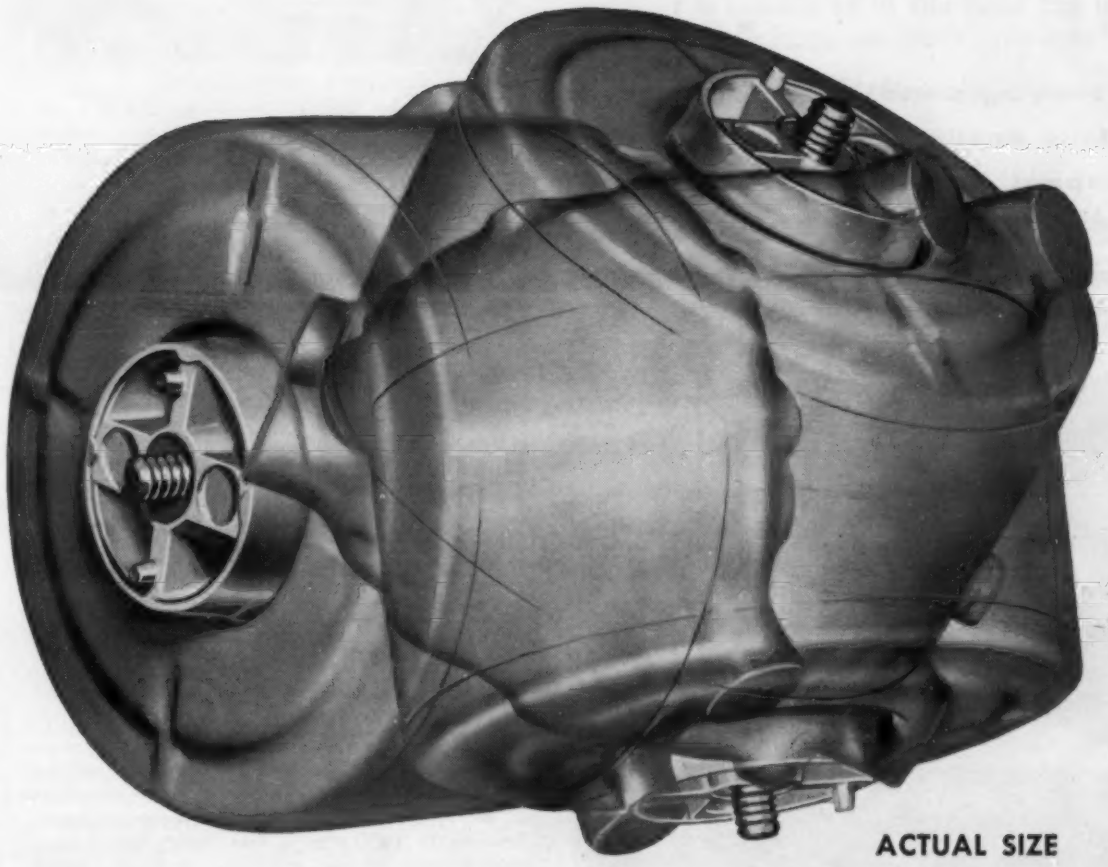
INDEPENDENCE, Mo. — Bolt-free construction is featured in the new series "S" natural draft cooling towers built of redwood and steel by Dover Mfg. Co.



The tower can easily be knocked down for installation in hard to reach spots—entire unit can be erected in 20 minutes using only a screwdriver, the company claims. Basin is one piece, leak-proof unit of hot-dip galvanized steel; crown and tie-rod are also hot-dipped to prevent rusting; louvers are of "Clear All Heart" redwood.

Natural draft towers are available in sizes from 2 to 225 tons. Dover also manufactures the same model but with all-steel construction (series K), to meet municipal fire codes, it was added.

For All-Angle Operation...



ACTUAL SIZE

New Lightweight Redmond Single-Bearing MonoMotor

This new all-angle single-bearing condenser fan MonoMotor was developed specifically for the refrigeration and air conditioning industries in answer to modern demands for a smaller, lighter, yet more powerful motor. It is adaptable for a multitude of applications where a long-life quality motor is needed that will give years of continuous service-free use at low operating cost.

All-angle operation of the AM-4 is achieved through a special thrust bearing and pin assembly. The rotor end play is controlled to very close tolerances, which makes possible the mounting of the motor in any position without the rotor floating in the bearing.

With the new Redmond positive oiling system the AM-4 is guaranteed not to leak oil in all-angle use or in shipment. This design provides an extra large oil reservoir for lifetime lubrication. Positive oiling is achieved through the forced recirculation of the lubricant, which is completely suspended and uniformly distributed in pure wool and nylon wicks.

The basic AM-4, rated at 1½ through 16 watts, is 4-pole, 1550 RPM, 115 volts, 50/60 cycles, and is available in odd voltages and frequencies.

It will pay you to obtain complete information about this new motor by sending for the literature described below.

Send for Complete Performance Data

Write for the "AM-4 Bulletin"—it contains complete information on the design features, dimensions, performance, and operational data.

The Standard of Dependability

Redmond COMPANY Inc.
OWOSSO, MICHIGAN

ADVERTISED IN The Saturday Evening POST

THE BIG NAME IN SMALL MOTORS

For more information about products advertised on this page use Information Center, page 22.

What Was New
At the Restaurant Show

Products shown on this and the following page were displayed at the National Restaurant Association exhibit in Chicago. Other pictures of these items were offered in the May 20 and 27 issues. For further information on these products, please use Key Numbers and the "Information Center" blank on page 22.

——KEY NO. G-6113——

AN AUTOMATIC CAFETERIA that serves refrigerated foods and hot sandwiches cooked in 15 seconds by Radarange, both from the same unit, is subject of serious discussion between Leonard Sheehan, (facing camera) sales representative for Eastern Electric Co., and two visiting restaurateurs.

——KEY NO. G-6114——

PUSHBUTTON VALVE and single hose for dispensing four flavors on "Bar-Master" carbonated drink dispenser is demonstrated by Robert Friedman, national sales director of Bar-O-Matic Sales Co.

——KEY NO. G-6115——

NEW AUTOMATIC DEFROSTING, 31-cu. ft. freezer with forced air cooling and built-in heaters around door frames and locks is described by Robert Johnson, sales engineer for Puffer-Hubbard Refrigerator Co. (l.) to James R. Malloy of Bloomington, Ill.

——KEY NO. G-6116——

ALL SMILES over new full vision case line are Mrs. Lawrence Poole and Joseph Eventoff, president of Evans Mfg. Corp. In background is self-contained, automatic defrosting dairy reach-in. At right is counter height display case with Formica top.

——KEY NO. G-6119——

APPETIZER AND SALAD display case 92 in. long got feature spot in Coldin Cabinet Co. booth, while Newton L. Gold, Coldin district representative (l.) makes sure you don't miss it. Alex Limmer, Coldin general manager, is at right.

——KEY NO. G-6117——

STUDYING FABRICATION BLUEPRINTS on Bally Case & Cooler Co.'s combination freezer and cooler with new flexible dimensions and 5-in. thick walls all around are (l. to r.) Phil M. Spero of Spero Restaurant Supply, Syracuse, N. Y.; Charles C. Rion, Bally's New England regional sales manager; and Barney M. Maser, Chicago district sales manager.

——KEY NO. G-6120——

QUICK FILL AND NO FOAM are features of new portable drink dispenser with "Manifio" faucet exhibited by Carbonic Dispenser, Inc. Donald Hocter, national sales manager (r.), does the honors, while J. W. Moore of Aberdeen, Ohio, enjoys a drink.

——KEY NO. G-6118——

RESTAURANT WATER COOLER for remote applications made in sizes of 6 to 24 gals. capacity was introduced by Temprite Products Corp. Small size and accuracy of temperature control are outstanding features, according to J. W. Archibald, sales manager.

KOCH
JET forced draft
COOLING TOWER

An amazingly efficient tower that combines the simplicity of natural draft towers with all the efficiency of a forced draft tower.

* no moving parts!
* installs easily...anywhere!
* compact...attractive!
* COST LESS!

Available sizes match all self-contained air conditioners 3 to 25 tons

Amazingly
simple design!
Simply
amazing performance

Inlet Diffuser / Inductor Nozzles / Powerful Jet Action Forces Air / 500 F P M Velocity / Assures Intimate Contact with Water / Self-Cleaning Dynamic Sprays / No Wood-Fill / 360° Glass Eliminator / Plasticlad Finish Top to Bottom /

The same engineering skill that has made Koch products outstanding in the basic oil industry equipment field has gone into the manufacturing of the revolutionary new Koch Jet Action Cooling Tower.

A few areas are open for Manufacturer's Representatives. Right now . . . write for information.

KOCH
ENGINEERING CO.
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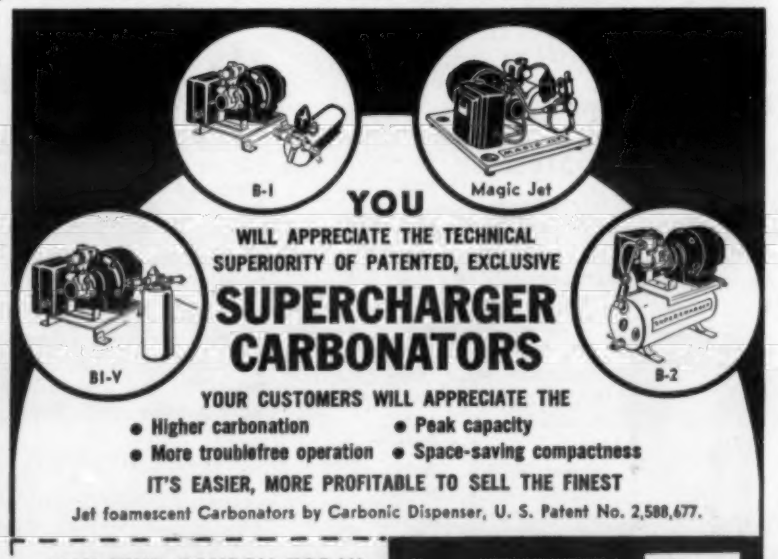
Wichita, Kansas



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WILL APPRECIATE THE TECHNICAL SUPERIORITY OF PATENTED, EXCLUSIVE
SUPERCHARGER CARBONATORS
YOUR CUSTOMERS WILL APPRECIATE THE
• Higher carbonation • Peak capacity
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IT'S EASIER, MORE PROFITABLE TO SELL THE FINEST
Jet foamescent Carbonators by Carbonic Dispenser, U. S. Patent No. 2,588,677.

MAIL THIS COUPON TODAY
For literature outlining the opportunity now open to make bigger profits selling Carbonic Dispenser Equipment.
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CARBONIC DISPENSER INC.
CANFIELD, OHIO

West Coast Plant: 16028 S. Marquardt Ave., P.O. Box 142, Norwalk, Calif
In Canada: General Equipment Corp., Ltd., Toronto, Ont.

——KEY NO. G-6121——

PORT HOLE LIGHT in mullion of new three-door, 58-cu. ft. reach-in bowed by Tyler Refrigeration Corp. is indicated by Sam West, Tyler's assistant export manager (r.), as Doyle Carpenter, institutional sales manager for Tyler, looks on.

——KEY NO. G-6125——

PATENTED DUCT to refrigerate the upper shelves of this salad display case is pointed out by B. Staub (r.), refrigeration engineer for Star Metal Mfg. Co. to Joe Sgro and Ralph H. Blalock of Springfield, Ill.

——KEY NO. G-6126——

A 400-LB. CAPACITY ice machine (actually two 200-lb. machines) with a 400-lb. bin is shown by Thomas Martin, sales manager for Uniflow Mfg. Co. (r.), to Phil Sher of American Refrigeration, Inc., Chicago.

——KEY NO. G-6127——

GONE ARE THE toe plates on this 30-gal. "Fast-Serv" soda fountain with patented "Coldpoint" draft station exhibited by Bastian-Blessing Co. Nine-inch ornamental legs improve sanitation and lift equipment to comfortable working height, says company.

——KEY NO. G-6122——

CUP-DROP MILK DISPENSER that will serve three flavors is subject to earnest conversation between Dan Daniels, president of Meterflo Dispensers (l.), and W. G. Chaikin of American Refrigeration and Air Conditioning Co., Los Angeles.

——KEY NO. G-6123——

REFRIGERATED VENDING MACHINE that provides complete automatic cafeteria service for plant lunchrooms is demonstrated by Jack B. Low, president of Wittenborg, Inc., who introduced the machine to this country from Denmark.

——KEY NO. G-6124——

DEMONSTRATING HAND-FREE operation of new model 80 console milk shake machine exhibited by Tekni-Craft, Ivan B. Young, Taylor distributor in Greensburg, Pa., serves Carol Sahm of Chicago.

RUBATEX ANSWERS AMANA'S DEMAND FOR "CONSISTENT INSULATION"

.....closed cellular structure ends "sweat" problem on refrigerant line ...gives it unusual flexibility...plus longer life.

Shown here is the refrigerator evaporator coil of Amana's Freezer Plus Refrigerator. Amana engineering specifies a closed cellular type of insulation in order to avoid the problems encountered with other types of insulation for this application.

Rubatex's nitrogen-filled closed cellular structure makes it completely water-proof; gives it excellent weather-aging characteristics and longer life. Extremely light, soft and resilient properties make Rubatex most adaptable as insulation on any cold lines requiring sweating resistance in manufacture or installation of cooling equipment as well as for formed tubing insulation for commercial, industrial and residential cold line piping.

Available in standard inside diameters of ¼" up to and including 2" with ⅜" and ½" wall thickness. Other sizes can be made to specification.

Produced in any lengths up to 250 feet. Can be slit for installed piping—and can be purchased in pre-cut lengths.

Rubatex Closed Cellular Rubber Tubing serves as insulation on aluminum tubing carrying the refrigerant from upper refrigerator compartment to lower freezer compartment in the FPR14 and FPR18 Freezer Plus Refrigerator models.

RUBATEX
CLOSED CELLULAR RUBBER
TUBING INSULATION

RUBATEX DIVISION, Dept. A–5
GREAT AMERICAN INDUSTRIES, INC.
Bedford, Virginia

For full details and sample of Rubatex Closed Cellular Rubber Tubing—print your name in space below, attach to your company letterhead and mail to us.

Name _____

Send for Free Sample and full details

What's Going On in HEATING

News of Methods, Products, People

Outlines Pressures In 'Rapid Growth' of Air Conditioning Which 'Will Make' Heating Contractors Enter Cooling Field

By Robert E. Lacey

DETROIT — Heating contractors should "soon get into the air conditioning business" because "in a few years there will be no choice, they will have to get into it or starve."

This combination challenge and warning was hurled at the Detroit Warm Air Heating Association here recently by Pierce Burke, product promotion manager of Carrier Corp.'s residential "Weathermakers."

'Cooling To Be Important'

Speaking on "Your Future in Air Conditioning," Burke told about 65 assembled heating contractors that "air conditioning will play a more important part in your life."

Heating men "will have to get into air conditioning" Burke declared as he outlined pressures at work "to make you get into it."

Beginning with elementary methods of air conditioning, Burke explained the "rapid evolution" of air conditioning and commented that "it has overtaken you faster than you heating men may think."

He said there has "been proved" a 25-30% increase in retail store sales after the buildings were air conditioned. "In addition, there has been a more stable labor situation when employes work in the comfort of air conditioned surroundings."

The air conditioning industry will grow faster in years to come, Burke indicated and "within a few years it will set a torrid pace."

Residential air conditioning "is the next big demand coming," he commented. Right now "one of every eight new homes is being air conditioned. By 1961," he said, "air conditioning will be going into one of every three new homes. Within 10 years one of every two new homes will be air conditioned," he predicted.

'Decide Now'

You "must decide now" if you want to be in this growing business, Burke cautioned the heating contractors. "There are 40 million homes not now air conditioned. In 18 million homes there is forced warm air heating." Burke avowed that "this is a tremendous source of prospects for air conditioning."

Where is the money? he queried. 'Who can afford to buy air conditioning?'"

He pointed out that there are 5.5 million families with an annual income of between $7,000 and $10,000. There are 2.1 million with incomes of $10-14,000. Besides that, the are 600 thousand with income of $15,000 and over. "In other words, there are 8.2 million potential customers who can afford air conditioning for their homes," Burke emphasized.

That is "more families than the entire air conditioning industry can now produce units for," he declaimed.

In answer to his own question as to what a contractor entering the air conditioning industry looks for from the manufacturer, Burke asserted that first "he looks for a realistic pricing structure." Then "where his capital is to come from."

Other things the contractor "looks for" include: protected territory; financial assistance; help for warehousing; floor planning and credit plans; sales training and continuing training; service training; advertising aid; sales promotion; and "the all important" public relations, Burke stated.

'Not Easy To Get Into Cooling'

"It's not an easy job to get into air conditioning," he warned. "Don't take it too lightly." Burke told the contractors they must make an "intelligent appraisal" of the situation.

Projecting his hearers into the future, Burke revealed that one third the energy developed "by space rockets" will be needed to cool the machine so it can operate. Farms where crops can be grown "under climate controlled conditions," were also considered by the speaker.

Heating men, according to Burke, have no choice. "In a few years they must get into air conditioning."

York-Shipley Buys Furnace Firm To Round Out Oil, Gas-Fired Line

YORK, Pa.—Purchase of the Furnace Div. of Jackson & Church Co., Saginaw, Mich., manufacturer of commercial and industrial warm air furnaces, by York-Shipley, Inc. was announced by S. H. Shipley, president of York-Shipley, Inc. here.

"With the acquisition of the Jackson & Church manufacturing rights for industrial and commercial warm air furnaces ranging in capacity from 115,000 to 5,000,000 B.t.u. per hour, we now have a complete line of residential, industrial, and commercial heating equipment, both oil and gas-fired," Shipley added.

"The Jackson & Church equipment will be manufactured over our present machine tools, and gives us a fully coordinated line inasmuch as the Jackson & Church equipment reaches fields which we had not previously covered."

The purchase agreement with Jackson & Church covers all of the assets of the Furnace Div., including designs, patents, trade marks, copyrights, and franchise agreements. The purchase also included the furnace division of Timco Corp., Tawas City, Mich., wholly owned subsidiary of Jackson & Church.

Jackson & Church manufactures three basic types of furnaces — suspended, floor, and direct fired.

York-Shipley's line of equipment includes gas and oil-fired furnaces, boilers and burners for residential heating, home air conditioning systems, including heat pumps, oil and gas-fired packaged automatic boilers, burners, and fuel-burning systems for industrial and commercial heating and power.

Richard J. Hoover, who joined the York-Shipley organization in June, 1956, as field factory service manager for residential heating, will become manager of the new York-Shipley Jackson & Church division. Hoover was with Jackson & Church for six years in service and sales capacities before joining York-Shipley.

F. C. Adams, who is sales manager of the Jackson & Church Furnace Div., and F. E. Young, assistant sales manager, will join the new York-Shipley division in those capacities. The field sales staff of 12 salesmen

(Concluded on next page)

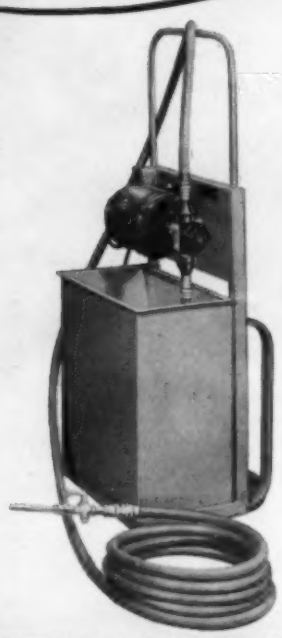
Baltimore Requires Heating Units Be Labeled as to Fuel

BALTIMORE — A new ordinance recently adopted here will require builders to label heating equipment to indicate whether or not it can be adapted for all types of fuel or must be limited to gas only, it has been announced.

The measure, as originally proposed, would have outlawed the so-called B-type flues which are useable for gas only. Upon protest of home builders, a compromise was worked out to require the labeling of flues in new houses, it was indicated.

NEW LOW-COST ANSWER TO
DE-SCALING and CLEANING Problems

The PORTABLE
HASTINGS CLEAN-IT



THE ONLY COMPLETE UNIT ON THE MARKET

INVALUABLE FOR CLEANING ALL TYPES OF CONDENSERS

Coil Surfaces — Coil Tubes
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FEATURES INCLUDE
ACID PROOF TANK • PUMP • HOSES
MOTOR REVERSIBLE FOR PRESSURE OR SUCTION
JET AND SUCTION NOZZLES • RUBBER TIRED WHEELS

HASTINGS CLEAN-IT
Safe — Convenient . . .
SAVES TIME and MONEY
SATISFACTION GUARANTEED

Write for Prices and Bulletin AC-67-C

HASTINGS AIR CONTROL, INC. 3215 Leavenworth Omaha 5, Nebraska

HASTINGS HOIST-IT
INSTALLS ATTIC AIR CONDITIONER IN 45 MINUTES

SAVE MONEY TIME AND TROUBLE

"HOIST-IT" HAS MANY USES

Transom And Attic Units Quickly Installed. Two Men Can Raise 4,000 Lbs. To 18 Ft. Ceiling. Model 80 Will Raise 8,000 Lbs.

HASTINGS HOIST-IT
Often Pays For Itself On One Job

Write for Prices and Bulletin AC-67-H

HASTINGS AIR CONTROL, INC. 3215 Leavenworth Omaha 5, Nebraska

For more information about products advertised on this page use Information Center, page 22.

York-Shipley --

(Concluded from preceding page)

and district sales managers will continue with York-Shipley selling the Jackson & Church line.

Other key employes in manufacturing, production, purchasing, engineering, and service departments have been moved to York.

Manufacture of the Jackson & Church equipment will begin in York-Shipley's East York plant as soon as dies, jigs, fixtures, and methods of manufacture become available.

Distribution of these products manufactured by York-Shipley will continue through the same Jackson & Church distributing organization.

Shipley stated that this merger, the second within the last two months, is in keeping with the company's announcement of November, 1956, at which time York-Shipley stated its over-all plan for future growth and diversification of products would include the acquisition of other companies within the heating industry, as well as companies outside the heating industry. The company recently announced the combining of Humble-Mundis Co. interests with those of York-Shipley.

L. S. Redford, president of Jackson & Church, announced that Howard K. Beck, who until now was president of Timco Corp. and Jackson & Church Furnace Div., is remaining with Jackson & Church as executive vice president.

Day & Night Offers Heating, Cooling Home Sales Manual

MONROVIA, Calif. — A new sales presentation manual has been designed by the Day & Night Mfg. Co. here for use by heating and air conditioning dealers.

The new manual outlines the sales story for use with potential year-round air conditioning buyers and covers the points of interest that urge each to buy.

"The manual, however, is designed to be flexible enough for any type of dealer and any type of operation," it was pointed out. "While much of the insert material is provided, it is primarily designed for 'personalization' by each dealer. Space is included for shop photographs, job layouts, snapshots of past installation, etc., to be added by each dealer."

It is available by writing to the Advertising Dept., Day & Night Mfg. Co., 700 Royal Oaks Dr., Monrovia, Calif. Cost: $3.50.

Ask Charter for Heating, Cooling Group In Pittsburgh

PITTSBURGH — An application for a charter was filed in Common Pleas Court by the Heating & Air Conditioning Contractors Association, with headquarters here.

Objectives of the group, according to the application, are "to encourage a spirit of cooperation and friendliness among members, to favorably impress the public, to promote public acceptance of warm air heating and air conditioning, and to exchange data with heating and conditioning groups."

D. E. Hickey is president.

'International Trio' Tops Technical School Exam

COLUMBUS, Ohio — The United States has no monopoly on the growing interest of keeping folks cool in summer as well as warm in winter.

This was proved here recently when results of a technical school examination were announced by the Janitrol Heating & Air Conditioning Div., Surface Combustion Corp.

Heading the class were three men—a Canadian, an Indian, and a Toledo, Ohioan—all with a grade of 94.

Wilber Miller of Weston, Ont., associated with Moffats, Ltd., Janitrol's Canadian affiliate; Raj Aggarwala, a technical student from Bikaner, in the Punjab Province of India; and Kent Black, a Janitrol representative in Toledo, formed an "international trio" to out-score all others in the final examination.

New S. C. Warm Air Heating Group To Try for Heating, Cooling Code

SPARTANBURG, S. C. — With Frank Zimmerman of the State Service Co., Inc., as president, the newly-organized Warm Air Heating & Air Conditioning Association here held its first meeting at the City Recreation Center recently.

Purpose of the new association is "to educate the public in regards to quality and inferior warm air heating and air conditioning equipment" in this area.

Zimmerman said the group, composed of heating and air conditioning contractors from Spartanburg and surrounding areas, will endeavor to have a heating and air conditioning code in the City of Spartanburg and Spartanburg County put into effect "which will protect the public from a safety viewpoint as well as performance." At present this protection is not available here, it was pointed out.

Other officers of the new association are Ben R. Pickens, of R. O. Pickens Co., vice president, and Harry Lancaster, Willard Oil Co., secretary and treasurer.

Bell Named To Head Gas Appliance Unit

COLUMBUS, Ohio—Robin A. Bell, vice president of Surface Combustion Corp. and general manager of the corporation's Janitrol and Kathabar divisions in Columbus, has been elected chairman of the Gas Unit Heater and Dust Furnace Div. of the Gas Appliance Manufacturers Association, it was announced here.

Baseboard Radiator Demand Causes Slant-Fin To Expand

RICHMOND HILL, N. Y.—Greatly increased manufacturing facilities have been announced by Slant-Fin Radiator Corp. here as a result of securing an adjacent building to the main plant.

"While the orders for Slant-Fin products created the need for additional space," said Melvin Dubin, company president, "the new ¾-in. baseboard radiators have been chiefly responsible for this expansion of facilities."

Introduced less than a year ago, the new baseboard radiator is claimed to be completely noiseless.

This feature is accomplished with sliding track hangers and a fin design that incorporates the Slant-Fin principle, the company indicated.

tailor-made for You

. . . and every one a perfect fit

No Sir, no ready-made here. Emerson-Electric motors are custom-engineered for your product . . . *designed* for you, *produced* for you and *priced* for you. It is no longer necessary to design your product around a *standard* motor. Emerson-Electric engineers will work with you through every stage of development. You get the product you want with a motor that EXACTLY suits your purposes . . . a custom-engineered motor at *standard motor prices.* Call, wire or write Dept. M-59 today, The Emerson Electric Mfg. Co., St. Louis 21, Mo.

EMERSON-ELECTRIC
of St. Louis
Since 1890

'Better Business Booster' Kit To Help Heating, Cooling Men

BETTER Heating - Cooling Council "Better Business Booster" kit proposal was first shown at the Mechanical Contractors Association of America convention in Miami Beach, Fla. Models Beverly Neal and Joan Gordon point to "Hometown Publicity in the E-Z Way" placard which explained how contractor associate members of the Council could cash in on national activities of BHC and special benefits exclusively created to increase business for hot water heating and air conditioning contractors.

Hot Water Heating, Cooling Promotion Tie-In Emphasizes 'Local Business'

NEW YORK CITY—Emphasizing the theme that "All Business is Local," Franklin Greene, executive director of the Better Heating-Cooling Council, presented a new promotion tie-in for hot water heating and cooling contractors designed to boost their business locally.

The visual presentation was made recently to the Mechanical Contractors Association of America at Miami Beach's Hotel Fontainebleau.

The "new and unique" approach by the council for contractor associate members would provide a seven-point program to help the contractor increase his residential and small building sales volume by personalized hometown promotion in his name. It is hoped that the associate membership and kit would serve as added tools to supplement the contractor's own sales efforts.

The first component of the kit would serve to identify the contractor with the Better Heating-Cooling Council. This would include wall plaques, window decals, and wallet cards.

A full-color cartoon movie, especially edited for consumer viewing would be made available to the associate member. The film would explain the history of heating and the need for proper comfort requirements in the residence of today. It would be made available free to associate members.

A "how-to" publicity kit geared for "hometown" operation would explain to the contractor how to place news of his company in area newspapers and on radio and television.

A specially-edited quarterly publication, *The Bullet,* would be issued at cost, and offer field-tested sales tips, practical market research, and news of building trends. Tying in with this would be the "Councilgram," a special rush notice mailed to contractors telling them of spot promotion news, national promotional tie-ins, and news of immediate publicity.

For direct sales contact, the associate member of BHC would have access to the upcoming homeowner publication "Heart of the House," an illustrated booklet that tells the complete story of needed comfort in the home. A second publication, a builder promotion booklet, would also be available to the contractor to help the builder merchandise houses with liquid heating and air conditioning.

Contractors interested in the new BHC associate membership program are invited to write Franklin Greene, executive director, Better Heating-Cooling Council, 250 Park Ave., New York 17, N. Y., to express their views and degree of interest.

Trane To Up Eastern Plant Production

SCRANTON, Pa.—Predicting employment increases for the years ahead at its plant here, Donald C. Minard, president of the Trane Co., LaCrosse, Wis., said that increases are expected as soon as the switch of its steam specialty line from LaCrosse to Scranton is completed, probably around September.

"We derive much satisfaction from the growth of our eastern production center," he said. "There is no question that the Scranton plant figures prominently in our long-range plans. Progress has been steady and production experience has been good."

Minard noted that the plant area in Scranton will soon exceed 180,000 sq. ft. when the sixth and latest addition of 30,000 sq. ft. is completed. Trane's current employment at the Scranton plant is about 400 of its nearly 4,000 total employment.

Orginally, convector heating units were manufactured in the Scranton plant but over a year ago plans were announced for adding air conditioning equipment production. Two such lines are currently in production, one making fan-coil equipment, and the other, induced air conditioners.

The total, Trane has or soon will have, five product lines manufactured in Scranton. These include baseboard heating for homes, wall-fin heating for industrial applications, the two air conditioning lines, and the steam specialty when the current transfer is completed.

The immediate advantages of the addition of the air conditioning lines are more balanced volume and steadier employment for the Scranton workers, Minard explained.

CORRECTION

DETROIT — Two important words were left out of Harry A. Peerbolte's formula published in the May 6 issue of the AIR CONDITIONING & REFRIGERATION NEWS.

His formula applies to calculating heat loss *by infiltration* only, not for the complete sensible heat load as stated.

To get the *infiltration loss,* Peerbolte, a Detroit consulting engineer, multiplies the cubic content of a room by .9 if there is one exposed wall, 1.3 if two walls are exposed, and 1.8 if three walls are exposed.

"However," Peerbolte added, "on jobs with today's increased window areas, and especially those in living, family, or activity rooms, the crackage factor for infiltration is more accurate and should be used instead of the three factors above."

Bryant To Launch 'Name the Pup' Contest

A FAMOUS advertising figure of the '20's, the Bryant pup, is returning. H. L. Clary, vice president and sales manager, said "Our dealers and customers never forgot the little dog so we are bringing him back in a national contest in June." Here Clary has an armload of the more than 3,000 Bryant pups that will be sent out in dealer contest kits. Zorita DeJarnette keeps tally. Grand prize in the "Name the Bryant Pup" contest will be a golden Cadillac, commemorating Bryant's "Golden Anniversary" year. There will also be 165 golden Bryant furnaces and water heaters for regional prize winners. Total jackpot is $50,000.

Central Supply Group Chief Named to Better Heating-Cooling Council Board

NEW YORK CITY—W. A. Fitzpatrick, president of the Central Supply Association, has been appointed to the board of directors of the Better Heating-Cooling Council.

Following an announcement of membership in April, CSA became the first plumbing-heating wholesaler group to back the council and participate in its industry-wide promotion campaign for liquid heating-cooling, it was pointed out.

Council president John E. Reed noted that CSA's membership "adds new significance" to the council's program of promotion for greater sales of hot water heating and compatible cooling systems.

The Better Heating-Cooling Council was organized in February 1956 by 20 industry manufacturers. The council is now supported by more than 45 members, including two national contractor associations in addition to CSA. The contractor-members are Mechanical Contractors Association of America and the National Association of Plumbing Contractors.

AIRO stands for
Speedy, dependable, world-wide service.
Air Conditioning and Refrigeration parts, equipment, supplies.
Write for Wholesale Catalog No. 57
AIRO SUPPLY CO.
2732 N. Ashland Ave., Chicago 14, Ill.

JUMBO sized YEATS dolly handles extra big water heaters, air conditioners and heating plants . . . amazingly easy!
you ROLL . . . instead of lift it*
SAVES time and backbreaking work
NOW!—with this big new dolly, ONE MAN can do the work of two or three with even less effort . . . less time! Specially built for handling big cumbersome units, this big YEATS dolly has such added features as two straps and ratchets, and two sets of wheels for rolling instead of lifting the load. Like all YEATS dollies this big new model is so well balanced that ONE man can raise or lower a heavy unit. Its tough "featherlight" aluminum alloy frame is completely padded in front . . . has smooth runners in back to ease the heaviest loads off truck tailgates.
*4 wheels for horizontal rolling
Big heavy units are easily rolled-controlled by ONE man. Foot pressure on one end of the balanced design frame, permits easy turning by simply pivoting one set of wheels.
Two 3½ second action, strap ratchets (a patented YEATS feature) fasten two heavy web straps on units in a vice tight, non-slip grip.
Endless belt, caterpillar type, STEP GLIDE permits handler to "run" the dolly on stair edges without lifting appliance or marring steps.
YEATS "Everlast" Covers available in all shapes & sizes
SEND postcard for full information on our complete line TODAY!
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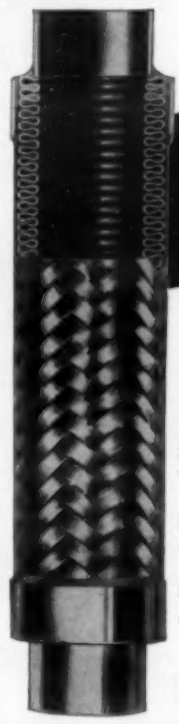
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. . . use leaktight
FLEXON VIBRA-SORBERS®
Flexon Vibra-Sorbers are economical insurance against the failure of rigid compressor piping due to vibration . . . and the resultant loss of costly refrigerants.
Vibra-Sorbers are all metal construction, extremely resistant to corrosion and fatigue, remaining leaktight throughout their long life.
Genuine Flexon Vibra-Sorbers are U.L. listed in sizes 3/16" through 1½" for both high and low side service. Larger diameters to 8" available. Write for Bulletin 139.
NOW AVAILABLE FROM FLEXONICS
Flex-O-Tube synthetic Freon-resistant hose for refrigeration and air conditioning service. Also, flexible metal connectors for circulating pumps. Write for information.
V-25
Flexonics Corporation
1415 S. Third Avenue
Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

TEMKON
Air Conditioning and Refrigeration
TEMPERATURE LIMITED
Burlington Road, London, SW6. Cables: Temtur, London
Largest Producer of Air Conditioning Units outside the U.S.A.

DESIGNER of the Blue Onion's unusual air conditioning system in Las Vegas, Nev., was Lew Hogan, engineer for Western Heating & Ventilating. Here he tests the installation and finds it satisfactory. Discharge unit, designed specifically for the job, directs air over the heads of customers.

SUSPENDED out of the way when not in actual use, these flexible ducts provide full air conditioning for drive-in customers. They are designed to separate from the system without breakage in the event forgetful customer drives off without removing the outlet. Shut-off dampers on the discharge boot prevent waste of air when not in use.

Drive-In Air Conditioning--

(Concluded from Page 1, Col. 3)

car in the intense heat of the Nevada summer sun but sends in warm air in winter.

This new restaurant has been completely equipped to provide instant air conditioning to any car driving into one of the 30 parking stalls along the 250-ft. "Weatherwalk" as well as to the restaurant itself.

Equipment for the unusual installation was provided by Carrier. Engineering and installation was done by Western Heating & Ventilating, Inc., of Las Vegas, Carrier's distributor in that area.

Air Delivered In Flexible Ducts

Air is delivered to cars through a 6-in. rubberized flexible duct, terminating in a specially designed boot. The boot is inserted in the driver's window. It is held in place by upward pressure exerted by a spring inside of the duct.

Engineered by Western Heating & Ventilating to fit all makes of cars, the boot discharges conditioned air over the heads of the Blue Onion's "mobile customers." A hand-operated volume damper and directional vane is closed when the unit is not in use to prevent loss of heating or cooling.

A major engineering problem to be overcome, Western Heating engineers explained, was the varying sizes of automobile windows, and the height of these windows from the ground.

Varying Sizes of Windows Considered

Older American cars, the engineers point out, are fairly high, and present one attachment problem, while foreign cars are low and present another. The varying sizes of the windows in different makes of cars, trucks, and pickup trucks were also considered. As yet, no car has appeared which the boot did not fit.

And if a car attempts to leave without first removing the boot, an ingeniously-contrived dual-spring arrangement on the take-off from the main air conditioning system gives way. The duct drops undamaged alongside the car. In a matter of seconds, it may be reinserted in the main supply system, with new break-away clips.

The most notable case of a customer making off with the ductwork involved an ambulance in which the driver was detailed to an accident, by radio, while enjoying a bite to eat. Without hesitation, he backed out, taking the boot and duct with him.

The system has been designed to handle temperatures as high as 115° F. Average daily temperature in Las Vegas during July and August is 105°. It is larger than necessary to cool 30 car ports in order to allow for future restaurant expansion.

In addition to providing the utmost in customer comfort the year around, the Blue Onion was designed to aid car hops and waitresses provide rapid, efficient service to diners.

"Magic carpet" doors to the car hop section of the restaurant, and conveyor systems from the kitchen to the car hops and dining room waitresses speed service and enable each employe to handle a larger number of customers efficiently.

Bill Brandt, partner and resident manager of the drive-in, predicted that within five years practically every other drive-in in the area would have a similar installation.

The new restaurant contains terrazzo floors, gold colored acoustical plastic ceiling, and blue leather booths. It is one of a chain of five restaurants. The others are located in Oxnard and Santa Barbara, Calif.

Amco
CONDENSATE PUMPS
★ 20 FT. HEAD
★ FLOAT CONTROL
★ QUIET-HEAVY CONSTRUCTION
★ PLUG IN PRE-WIRED

AMERICAN COMFORT MFG. CO.
2401 MAIN ST. EVANSTON, ILL.

The man shown above is using live steam to remove every vestige of dirt and scale prior to applying Halstead & Mitchell protections which withstand both rusting and *all* present day water treatments normally recommended for cooling towers and condensers. These unusual protections are used *only* on Halstead & Mitchell's Cooling Towers.

First protection is Vinsynite. Vinsynite works twice—it phosphates the metal, stopping rust dead in its tracks, and it forms the perfect adhesive base for paint coats to follow.

Vinyl Zinc is then applied, and vinyl paints have made their reputation because they are tough, flexible, inert and water resistant. Water vapor is locked out as the Vinyl Zinc locks to the underlying Vinsynite.

Third protection is chlorinated rubber, a paint which forms a thick film. Adequate film thickness is important when contact with water and high humidity is unrelenting, as in cooling tower service. Chlorinated rubber is also noted for its toughness and water resistance.

Halstead & Mitchell protections are more than painted on. They are hydraulically forced into every nook and cranny of every Halstead & Mitchell Cooling Tower so that no spot can ever be left unprotected as a starting point for rust. The combination of heavy film, vapor seal, toughness and tremendous adhesion offer protection against corrosion matched by no other manufacturer.

Want Details on the Widest Selection in Cooling Towers?

COMMERCIAL · INDUSTRIAL · RESIDENTIAL · TAKE-APART · CENTRIFUGAL

Write Halstead & Mitchell, Bessemer Bldg., Pittsburgh 22, Pa.
Or See Your Leading Wholesaler

HM Halstead & Mitchell

WOOD ROTTING, TOO, CAN BE STOPPED! We do more than praise the long life of wood used in our wetted decks—we are the only manufacturer who offers a 20-Year Guarantee on wetted deck wood against rotting or attack by fungus!

Crowds Drawn to Many Products Exhibited

The Western Air Conditioning, Heating, and Refrigeration Exhibit and Conference held last month at the Shrine Exposition hall in Los Angeles, was termed the industry's first real "selling" trade show to be staged on the West Coast.

Some 4,000 members of the industry attended the show, plus members of the public (who were admitted the final two days). Because there has been considerable interest in the Show and the products that were exhibited, the NEWS is publishing a picture presentation designed to give an over-all report on the Show.

HIGH-VELOCITY air conditioning systems were featured in the Anemostat display. At left is the model UTW unit with Minneapolis-Honeywell pneumatic controls. At right is a unit with Johnson Service Co. controls used in a double-duct type system. Discussing high velocity systems are Ed Wilkerson (left) of Fluor Corp., and Robert Barton, Minneapolis-Honeywell.

NEW CONDENSING UNIT and compressor models got a lot of attention at the West Coast show. John Zant (left) of Copeland Refrigeration Corp., describes features of 3-hp. condensing unit to Joe Hayes of Weber Showcase & Fixture Co. On table at left is new 5-hp. 440-volt Refrigerant-12 compressor.

NEW MULTI-ZONE air conditioner was part of extensive Dunham-Bush exhibit. Brunner refrigeration compressors and other Dunham-Bush items were shown in another space. In discussion here are Jerome Ives of Pierce Engineering Co. (left) and Ralph Hitchcock.

DUST CONTROL and dust elimination was featured in the exhibit of the Farr Co., Los Angeles manufacturer of filter and dust eliminating equipment.

WELL-PLEASED with the Show were these people in the exhibit manned by the Richard S. Dawson Co., West Coast agent which displayed products of Bell & Gossett Co., and Jackes-Evans Mfg. Co. Standing at left are Dawson, M. Wiggins of the Dawson Co., and J. H. Marling, sales manager of Jackes-Evans.

A 60-IN. DIAMETER backward curved blower for big air conditioning applications was shown by Airfan Engineering Co., and drew the close attention of George Schaefer (left) of Advance Metal Products, Culver City, Calif., and Jim Johanson, Hughes Aircraft, El Segundo, Calif.

BROAD LINE OF air conditioning and heat transfer equipment was shown in the exhibit of McQuay, Inc. products by Tennity & Co., Inc., its representative in the southern California area.

COOLING TOWERS and the market for this product were featured in the exhibit put on at the Western Air Conditioning and Refrigeration Show by the Marley Co.

REFRIGERATION MANUFACTURING • RHEEM
CLIMATIC AIR • LINTERN • PFAUDLER
TRANSICOLD • UNIFLO • AMANA • BRYANT

THE QUALITY OF THE SUPER-FLO FILTER-DRIER

JOHN E. MITCHELL • EATON • NOVI
KYSOR HEATER • ARMSTRONG-FURNACE

CAN BE FOUND IN ITS CUSTOMERS

A. E. A. MANUFACTURING • LONERGAN
AMERICAN MOTORS • NOVI • HUNTER
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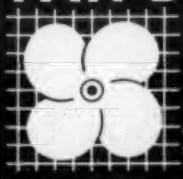
FEDERAL REFRIGERATOR • GILSON • GIBTON
IDEAL COOLER • NATIONAL-U. S. RADIATOR
D. W. ONAN & SONS • FORD MOTOR CO.
PERFECTION INDUSTRIES • SIMPLEX MFG.
JOHN E. MITCHELL • O. A. SUTTON • EATON
REFRIGERATION ENGINEERING • FRIGIKAR
EMIL STEINHORST & SONS

Available to the Trade thru Wholesalers Everywhere

9/16 STANDARD
Write for Bulletin R-11

REMCO INC.
ZELIENOPLE, PA.

FAN BLADES



12" - 15" - 16" - 20"
22" - 24" - 30" - 36"
42" - 48" & 54"
Other sizes made to your specifications.

WIRE GUARD, SHELVES, ETC.

C&H Air Conditioning Fan Company, Inc.
1591-1623 DeKALB AVE.
ATLANTA 7, GA.
PRECISION QUALITY SINCE 1935

Edwards
CO-AXIAL CONDENSERS

The NEWEST design in water-cooled refrigerant condensers. Used by major equipment manufacturers because of these—

SELLING ADVANTAGES:
- Use 35% less water
- Cost reduced 30 to 40%
- Stock sizes from ½ to 7½ tons—LARGER capacities available
- No internal joints
- Easy installation
- Many compact shapes

A TYPICAL COMPACT CONFIGURATION

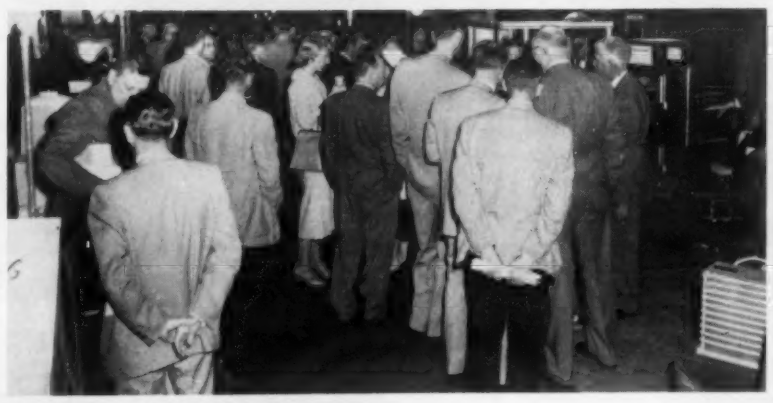
Contact our engineering department for FREE technical assistance, regarding your specific installation requirements.

Send for catalog TT-653 TODAY or call TERHUNE 5-2808

EDWARDS ENGINEERING CORP.
100 ALEXANDER AVENUE • POMPTON PLAINS, NEW JERSEY

For more information about products advertised on this page use Information Center, page 22.

At Industry's First Western 'Selling' Show



CROWDS THRONG the aisles of the Shrine exhibit hall in Los Angeles to view the products exhibited at the Western Air Conditioning and Refrigeration Show. In the foreground an interested group watches the operating demonstration of Recold's "Vapot" defrosting cycle, in the booth of Authorized Supply Co.

BLOWERS AND AIR HANDLING equipment for all sizes of air conditioning systems were shown by Utility Fan Corp., a division of Utility Appliance Corp.

OPERATING EFFICIENCIES of Fraser-Johnston air-cooled residential air conditioning unit were shown by means of special operating demonstrator (at left). At right, I. S. Fairbanks (facing camera) of the company discusses new vertical furnace, available with summer air conditioning coil mounted on the top.

"COMFORT CURTAIN" school air conditioning system, and 5-ton self-contained horizontal air conditioner were featured in the exhibit of the Lennox-Pacific Coast Co.

(More Pictures on Page 32)

HEAT PUMPS in 5-ton and 10-ton sizes were shown by General Air Conditioning Corp., Los Angeles manufacturer. Frances Jaffa poses with the 5-ton model. At far right is 5-ton air-cooled cabinet model (designed to back up against window or other opening in a building).

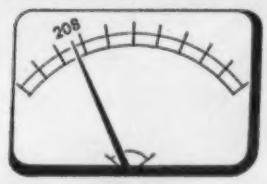
AIR DIFFUSING devices were prominent at the Western Show, and Krueger Air Conditioning Co., an Arizona firm, showed various types of grilles and diffusers against an attractive background.

ARE you in need of a "just right" man to fill a slot in your organization—the man you are looking for will be reading the

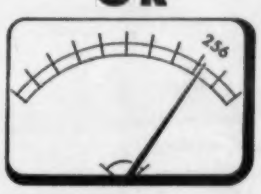
NEWS' CLASSIFIED ADS

(See Page 34)

WHEN LINE VOLTAGE MEASURES

BELOW  **NORMAL**

OR

ABOVE  **NORMAL**

YOU NEED AN Acme Electric Boost and Buck Transformer

Air conditioning equipment cannot function properly if connected to an electrical circuit that is substantially below or in excess of the voltage of the motors. A one-ton unit with a motor designed for 230 volt operation should not be connected to a 208 volt circuit with the expectation that it will operate properly. When motor lacks sufficient torque, runs more than a few seconds on starting winding, overheats, or cycles off-and-on, check the voltage and install the proper size Acme Electric Boost and Buck transformer to correct the trouble.

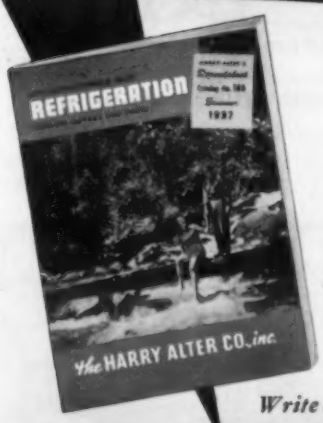
Easily installed at the point of use, Acme Electric Boost and Buck transformers can be interconnected to correct a low voltage condition or a condition of excessive voltage supply. They're compact, inexpensive.

Write for Boost and Buck transformer catalog.

ACME ELECTRIC CORP.
926 WATER STREET
CUBA, N. Y.

Acme Electric
TRANSFORMERS

REFRIGERATION is our SPECIALTY
Air Conditioning and Electric Motors, Too!



OVER 10,000 ITEMS . . . the world's most comprehensive listing of parts and supplies . . . appear in the Harry Alter DEPENDABOOK No. 166 Summer, 1957 complete with illustrations, descriptions, prices and other useful information.

SAVE MONEY, time and effort by ordering the parts you need from this compact, easy-to-read, up-to-date catalog.

Write on your letterhead for the DEPENDABOOK

PARTS and Supplies

WHOLESALE ONLY

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or visit branches 134 Lafayette Street, New York 13, N. Y. · 122 Parkhouse Street, Dallas 7, Texas · Bldg. B, Unit 8, 690 Stewart Ave., S.W., Atlanta 10, Ga.

Seen at First Western 'Selling' Show

(Concluded from page 31)

VARIETY OF MEASURING and testing instruments for the industry, by Partlow, F. W. Dwyer Mfg. Co., and Bendix-Friez, were displayed by Pacific Scientific Co., together with Alco valves and controls, and a new circular-type air-cooled condenser (left foreground) made by Air Conditioning Corp. of Tulsa, Okla.

GOOD AUDIENCE for a discussion which he is leading is enjoyed by Art Hess (far right) of Hess, Greiner & Polland, manufacturer's representative which showed the Recold line of air conditioners and other lines handled by the firm. Prominent in engineering society activities, Hess was active in working out the program for the Coast show and conferences.

CUTAWAY DISPLAY models of Tecumseh compressors, including some new models in larger sizes, got some intensive study from Show visitors.

MOST OF THE EXHIBITS at the West Coast show, like the one produced by American Air Filter Co., showing samples of the company's complete line of residential, commercial, and industrial air filters, were full-scale presentations, comparable to those seen at national showings.

VIBRATION DAMPNER rails for refrigeration compressors and condensers, designed to control all vibration and excessive motion of units in operation, are marketed under trade name "Vibrex" by M. W. Sausse & Co., Los Angeles firm.

COOLING TOWERS in a couple of sizes and styles were exhibited by the E. D. Goodfellow Co., a Tennessee corporation.

YEAR-ROUND and self-contained summer air conditioning systems, in its "Permaglas" line, were shown to the West Coast show visitors by A. O. Smith Corp.

CORRECTION

Evaporator Face Area Wrong In Worthington Specs

Evaporator face area of Worthington Corp.'s SCY series of commercial air conditioners was incorrectly listed in the special Air Conditioning Specifications supplement published with the March 18 issue of the NEWS, the NEWS has recently learned.

The error is also carried in the Specifications booklet reprinted from the issue. It appears in the Worthington figures listed on page 8.

The correct evaporator face area for the SCY units are as follows:

Model No.	*Sq. Ft.*
SCY-40	3.84
SCY-60	5.22
SCY-80	8.38
SCY-1010	13.0
SCY-1550	13.0

To Cool School Bldg.

DALLAS—St. Mark's School of Texas has broken ground for a $120,000 completely air conditioned science building on the campus, 10600 Preston Rd.

PREST-O-LITE
Trade-Mark
Halide Leak Detector
. . . reacts instantly with pin-point accuracy

Here's a leak detector that is especially designed to speed the location of halide refrigerant gas leaks that are too small to detect with soapy water. Available to servicemen and engineers in two handy kits.

The B Tank Outfit is particularly useful where testing space is limited. The leak detector is connected to the acetylene fuel tank by means of an extra long hose to enable you to reach into corners or between pipes *while you leave the tank outside.* Instantly detects as little as 100 parts of halide gas in a million parts of air.

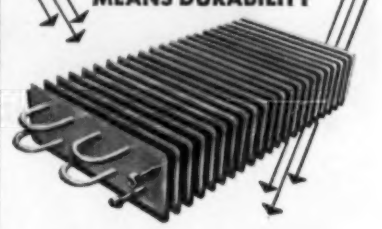
Smaller, lighter in weight, and even more compact, the MC Tank Outfit offers the same pinpoint accuracy yet can be carried from job to job more easily.

Ask your nearby LINDE Jobber to demonstrate today. Or, if you wish further information, write: Linde Air Products Company, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Linde Air Products Company, Division of Union Carbide Canada Limited, Toronto.

Get it from your LINDE Jobber

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

LARKIN
MEANS DURABILITY



THE ORIGINAL, PATENTED
CROSS-FIN COIL

The refrigeration coil that changed an industry stands today unchallenged for performance, user satisfaction and lasting durability. Made from the finest materials by skilled craftsmen under exacting standards, every Larkin Coil features imbedded fin-to-tube contact, swaged connection, silfos welded construction, and staggered tubing. Write for complete details.

•

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Air Cooled and Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers

LARKIN COILS INC.
519 MEMORIAL DR., S.E. • ATLANTA, GA.

PRIMORE AUTOMOTIVE AIR CONDITIONING VALVES

are rapidly becoming the standard of the industry

Here's why—

- **Designed especially for Automotive use**
- **Precision manufactured**
- **Hydrogen brazed steel construction cuts costs**

Primore's engineers have designed a series of Compressor Pad Valves and fittings especially for Automotive Air Conditioning units.

In addition, Primore engineered valves are also available for automotive air conditioning components such as Condensers, Receivers, Evaporators, etc.

NEW PRIMORE REFRIGERATION VALVE CATALOG NOW AVAILABLE

Complete details and data for Household and Commercial Refrigeration, Residential and Automotive Air Conditioning valves and fittings. Write, or phone for your copy.

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310 National Bank Bldg. Adrian, Mich.
designing · sales · engineering

Beverage-Air

ICE CREAM MIX and BULK COOLERS

Illustrates one Pump and Jar arrangement available on MS48-S

. . . they sell while they protect

Capacity and durability combined with positive, low cost cooling. Widest range of remote or self-contained models. Reinforced stainless steel tops — plain or with various pump and fruit jar arrangements. Hold 5 and 10-gal. cans with no lost space. Refrigerated "Utility" compartment for extras.

Model MS62-S

Write for literature and prices FREE.

THE PUNXSUTAWNEY COMPANY
705 THIRD ST. - PUNXSUTAWNEY, PA.

For more information about products advertised on this page use Information Center, page 22.

NARGUS--

(Concluded from Page 1, Col. 5)

ness meetings will be held during the morning with the exhibits open in the afternoon, except on Sunday, June 9, when the exhibit hall will be open at 10 a.m.

For the first time in its history, NARGUS will offer a multiple-session convention program so that retailers will be able to select the session likely to be of the most benefit. On Monday, Tuesday, and Wednesday mornings from 9:30 to 11:30 o'clock there will be a choice of three different business meetings.

The experience of leading meat packers' representatives who have visited with retailers throughout the country and worked out solutions to their meat problems will be utilized in business sessions on Monday and Tuesday, June 10 and 11, from 9:30 to 11:30 a.m.

SESSION ON 'BUYING & MERCHANDISING MEATS'

During the Monday meat management session, representatives of Armour & Co. will make presentations on "Buying and Merchandising Meats" and will answer questions pertaining to this topic. On Tuesday, representatives of Swift & Co. will present "Meat Preparation and Packaging," ranging from receiving meats at the store to departmentalization in the display case and operating costs.

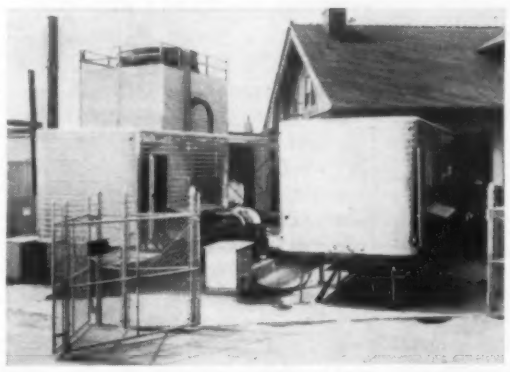
Three produce merchandising sessions will be included in the multiple-session convention program Monday through Wednesday. Profitable produce operations in small, medium, and large-volume stores in different sections of the country will be the topic of discussion by successful retailers and produce department managers.

STORE MODERNIZATION AND EXPANSION

Three business sessions on store modernization and expansion, covering building materials, factors to be considered in selecting a store location, various methods possible to finance a store in the current tight money market, stock placement, and departmental locations, will be presented by Ralph E. Ernst of Chicago, architect and engineer.

At the conclusion of divided meeting sessions there will be a general assembly when the discussion of subjects by speakers of national prominence will be broadened to industry problems and materials of general interest to all size operators.

A "gold mine" of information will also be available at the popular "Early Birds" sessions Monday through Wednesday at 8:30 a.m. in the Assembly Hall at Navy Pier, according to the association.



TWO GIANT TRAILERS each 32 ft. long, 10 ft. wide, and 13 ft. high house the air conditioning system with York turbomatic compressor that cools the clubhouse at the Washington Park race track near Chicago. They are parked behind the grandstand. System provides 1,500 tons of cooling.

Race Track Air Conditioning--

(Concluded from Page 1, Col. 3)

grandstand section that will seat 7,500 persons and allow standing room for twice that number.

Cooling the stands at Roosevelt Raceway is part of a $16,000,000 reconstruction job that will bring air conditioning to about 250,000 sq. ft. of space, including the betting areas, club houses, restaurants, bars, lounges, and even a fully equipped hospital. The complete installation will have 650 tons capacity, controlled automatically by a pneumatic system specially designed by Johnson Service Co.

Both Arlington and Washington are cooled by trailer-mounted air conditioning units. There are three portable compressor units at Arlington that produce 1,300 tons of cooling for stands and clubhouse.

Ice Storage—"ADD-A-BIN"—Space Savers

Ice Makers are placed on TOP of these bins
Built especially for Ice Makers of

FRIGIDAIRE—SCOTSMAN—KOLD DRAFT

Frigidaire: (No cutting needed of floor of present Frigidaire bin)

#400N for 225 lb. cuber—400/500 lbs. storage 45"L.x34"x27"H.
(3' stand) (each extra 'tilt door' $50.00) $210.00

#28 for 450 lb. cuber—900/1000 lbs. storage 75"L.x42"D.x28"H.
(3' stand) (each extra 'tilt door' $50.00) $485.00

SCOTSMAN ..... (1,2,3,4,5,400N,28) ..... **KOLD DRAFT**

	L.	D.	H.				
(1)	25"	x32"	x40"	SP002	Cap. 350/400 lbs.	FOB Bklyn, N.Y.	$ 195.00
(2)	36"	x32"	x40"	SP003	Cap. 450/500 lbs.	" " "	225.00
(3)	48"	x29"	x36"	SPA3005	Cap. 600/650 lbs.	" " "	425.00
(4)	74"	x29"	x48"	SPA3001	Cap. 1300/1650 lbs.	" " "	750.00
(5)	72"	x52"	x43"	SPA3002	Cap. 2750/3250 lbs.	" " "	1,095.00

NOTE: SPA 3005, SPA 3001, SPA 0002 stand is 20" high unless you want a lower stand.

These bins have doors of slant opening with sliding doors, — and in the larger capacities, they have "SHOVEL (tilt) DOORS" to handle quickly large quantities of ice with less labor.

Write for specifications and literature, for these bins or specials. **Also for full line of Clawson crushers for shaved ice and crushed ice at Factory Prices.**

N. SILVERMAN INC.
488 Seventh Ave., New York LA 4-2640—CH 4-3224

MARSH
Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.
PRESSURE GAUGES and Dial Thermometers for all services.
MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY
Sales Affiliate of Jas. P. Marsh Corporation
Dept. D., Skokie, Ill.

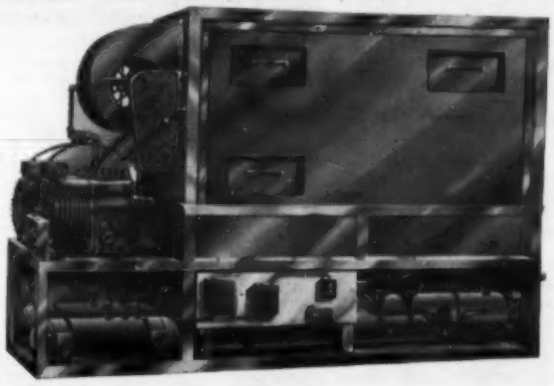
COND-AIR AIR CONDITIONING UNITS

Quality second to none...

Priced Lower than you would expect!

COND-AIR air conditioning units offer you the *best in quality*... exclusive stainless steel evaporative condenser tank. Packages are factory assembled and attractively finished. COND-AIR units are *low in price*, and they continue to save you money at every step of the installation... eliminate costly field labor, assembly work, cut installation to necessary field plumbing, high voltage, thermostat and sheet metal connections.
For top quality—and top economy—COND-AIR is your best buy!

COND-AIR completely packaged
DIRECT EXPANSION UNITS
These units incorporate a compressor, evaporative condenser, and air handler in one *complete* package. Available in 2, 3, 5, 7½, 10, 15 and 20 ton capacity. (20 ton capacity, Model EC 200 H, illustrated.)



COND-AIR completely packaged
WATER CHILLERS
These units incorporate a compressor, evaporative condenser, and chiller in an easily installed *complete* package. Available in 5, 7½, 10, 15 and 20 ton capacity. (15 ton capacity, Model WC 150 illustrated.)

COND-AIR completely packaged
AIR HANDLING UNITS
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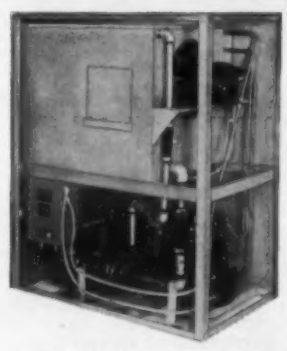

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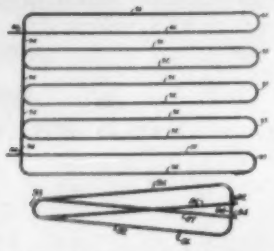
PATENTS *Weeks of March 5 & 12*

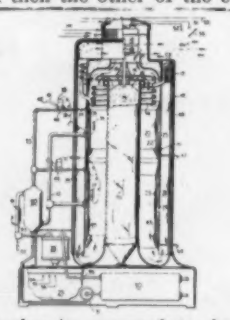
2,783,532. TUBE BENDING METHOD. Ray A. Sandberg, Waukegan, Ill., assignor to Houdaille Industries, Inc.



1. The method of forming a sinuous length of tubing which comprises winding flexible tubing into a helix with each turn of the helix generally triangular in shape and including a pair of elongated runs of tubing defining two sides of equal length of a triangle and joined by a relatively short straight run defining the base of a triangle and a curved portion joining one elongated run of one turn lying on one side of the helix with an elongated run of the succeeding turn lying on the opposite side of the helix and each turn overlying the next successive turn and being generally coextensive therewith. . . .

2,783,616. AIR COOLERS AND DEHUMIDIFIERS. Adiel Y. Dodge, Rockford, Ill.

7. In an air treating apparatus, the combination of a fan to force air in a vortex swirl through cylindrical passages, a precooling heat exchanger to cool incoming air and to temper air being discharged, a mechanical refrigerating machine including two cylindrical evaporators located in said cylindrical passages, said refrigerating means to chill the surfaces of first one and then the other of the evapora-



tors thereby to accumulate frost, detectors to determine the thickness of the frost comprising thermal bulbs spaced adjacent to but away from the cold surfaces, the bulbs to be contacted by the frost after the frost bridges the gap between the bulb and the cold surfaces. . . .

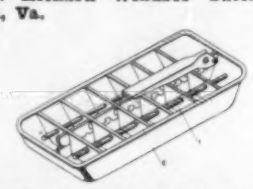
2,783,617. ELECTROMAGNETIC REFRIGERATOR DOOR LOCK. Paul Halovatch, West Haven, Conn.

1. An electromagnetic lock for a door of refrigerators or the like having a substantially rigid frame and a motor having electric circuit means, said lock comprising a casing mounted on the outside of the door, a bolt having a head and being slidable through said casing, a bracket carried by the refrigerator frame adapted to receive said bolt therewithin when in an outwardly projected position, whereby to lock the refrigerator door or the like, a spring sleeving said bolt within said casing and abutting the head of said bolt whereby to normally urge said bolt out of said bracket, solenoid means for urging said bolt outwardly of said casing and into said bracket, said solenoid means being connected in the circuit of said refrigerator motor, and manually operable switch means for deenergizing said solenoid means to permit the unlocking of the refrigerator. . . .

2,783,618. RADIANT COOLING TUNNELS. Clarence A. Mills, Cincinnati, Ohio, assignor to Reflectotherm, Inc., Cincinnati, Ohio.

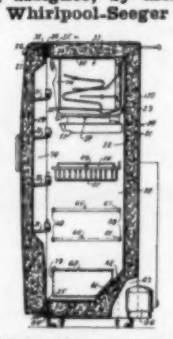
1. An endless conveyor and cooling tunnel having enclosing side walls, said conveyor being of the type having link chains which pass over sprockets and which have cross flights extending across between the links, a conveyor belt carried by the cross flights, spaced cooling coil extending vertically at right angles up from the conveyor belt and a two-faced curved reflector member having arcs of curvature which reflect heat waves from the conveyor partly against the cooling coil on one side and partly against the cooling coil which is spaced from the first noted cooling coil on the other side.

2,783,619. COMBINATION ICE CUBE, CRACKED ICE, AND QUICK FREEZE TRAY. Richard Windsor Yates, Arlington, Va.



A device for freezing water into ice cubes and for cracking said ice cubes into fragments comprising, a tray having a base and side walls extending upwardly from said base, a plurality of spaced substantially vertical separator plates transversely disposed within said tray to form a plurality of ice cube compartments, means to effect pivotal movement of said plates about the longitudinal axis of said tray, said tray adapted to receive water to be frozen within said compartments, each of said plates having a centrally disposed opening therethrough said opening being normally completely immersed in the water contained within the tray, a rod longitudinally extending through each of said openings, said rod having a plurality of spaced notches along its entire length, each of said notches pivotably engaging the lower peripheral edge of each of said corresponding plate openings. . . .

2,783,620. REFRIGERATION SYSTEM. William B. Herndon, Jr., Evansville, Ind., assignor, by mesne assignments, to Whirlpool-Seeger Corp.



1. A refrigeration system comprising an insulated cabinet having an outer shell, an inner shell, and a door opening closed by an insulated door, a substantially U-shaped evaporator carried by the top wall of said liner, said evaporator comprising an integral pair of side walls joined by a bottom wall, said side walls being trapezoidal in shape and longer at their rear edges, said evaporator having a rear wall provided with drain apertures above the bottom level, a motor compressor, condenser, and capillary restrictor, a receiver comprising an enlarged tubular member having an angular bend, forming an upper substantially horizontal portion and a lower substantially vertical portion, said upper portion having a suction tube connected to said compressor, a continuous length of evaporator tubing connected to the lower outlet of said vertical portion. . . .

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

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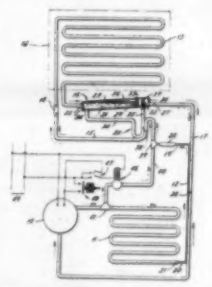
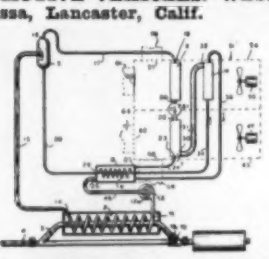
2,783,621. DEFROSTING REFRIGERATION SYSTEM. Lloyd A. Staebler, Oreland, and Elmer W. Zerfoss, Jr., Philadelphia, Pa., assignors to Philco Corp.



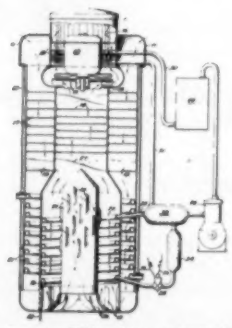
1. An arrangement for controlling the operation of a defrostable refrigerating system provided with an evaporator and refrigerant circulating means adapted, under one condition of operation, to pass liquid refrigerant to said evaporator to cool the same and, under another condition of operation, to pass gaseous refrigerant to said evaporator to heat the same; said arrangement comprising: a refrigerant trap connected with the outlet of said evaporator and having a conduit portion in which liquid refrigerant accumulates in a static column which, during said one condition of operation, prevents the escape of liquid refrigerant from said trap through said conduit portion; and control means for initiating said other condition of operation. . . .

2,783,622. AIR CONDITIONER FOR AUTOMOTIVE VEHICLES. Wilbur O. Bourassa, Lancaster, Calif.



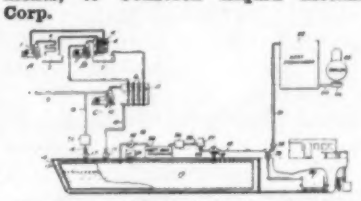
1. In refrigeration apparatus for conditioning air within the body of an automobile having an internal combustion engine with an exhaust pipe, an interior driving compartment within said body, and a compartment separated from said driving compartment, in combination, a generator disposed beneath said body containing a water solution of lithium bromide in heat exchange relation to said vehicle exhaust pipe, discharging said solution, after heating, into a separator, a condenser above said separator receiving water vapor from said separator, a power driven air fan forcing a draft of cooling air over said condenser, an evaporator, an expansion valve connecting said condenser to said evaporator, a power driven air fan directing a draft of atmospheric air over said evaporator into the driving compartment of said vehicle, a heat exchanger having an enclosing shell and an inner coiled tube receiving hot concentrated solution from said separator and bringing it into thermal relation with cooled liquid in said enclosing shell flowing from said evaporator, an absorber receiving water vapor from said evaporator and bringing it into contact with a cooled concentrated solution of lithium bromide from said heat exchanger coiled tube and forming a diluted solution, a tube connecting said absorber to the shell of said heat exchanger, and a power driven pump drawing liquid from the shell of said heat exchanger and forcing said liquid into said generator, and from said generator into said separator. . . .

2,783,623. AIR CONDITIONING APPARATUS. Adiel Y. Dodge, Rockford, Ill.



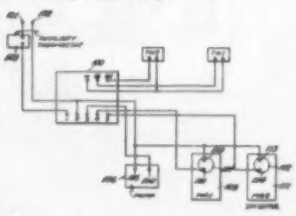
1. An air conditioning apparatus comprising a hollow casing separated by a tubular sleeve into concentric elongated passages, means to cause a circulation of air into one end of one of the passages through said one of the passages into the other end of the other passage and through the other passage out of the casing, cooling means associated with the wall adjacent to said other end of the passages only to cool the air flowing therethrough, the air flowing through said one end of the passages, being in heat exchanging relationship through the sleeve whereby incoming warm air will be cooled by and will warm outgoing cold air, a conduit extending centrally into the tubular sleeve at said other end of the passages and formed with air inlet openings therein, and means defining an air outlet from the conduit into the tubular wall at the end of the tubular wall at which air normally enters it.

2,783,624. METHOD OF LIQUEFYING GAS. Willard L. Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Constock Liquid Methane Corp.



1. The method of storing hydrocarbons of low boiling point, consisting essentially of methane, which consists in providing a supply of hydrocarbon in gaseous condition, compressing it to a pressure above its critical pressure, cooling the compressed gas to a temperature above liquefaction temperature under the pressure condition existing, then discharging it to a storage receiver with expansion to about atmospheric pressure to lower the temperature to liquefaction temperature to produce a mixture of liquid and gas, withdrawing the gaseous phase as a gas and adding gas from the supply and recompressing and recooling it and then sending it back to the receiver, continuing such circulation until the receiver is filled with a suitable quantity of liquid at substantially atmospheric pressure, bleeding the vapors released from the liquid in the receiver when the pressure in the receiver exceeds a predetermined level thereby to maintain a pressure therein at substantially atmospheric pressure.

2,783,976. CONTROL UNIT. Warren J. Anderson, Hillside, N. J.



4. In an air conditioning system, first and second hollow finned coils, each coil adapted to condition air there-

(Continued on next page)

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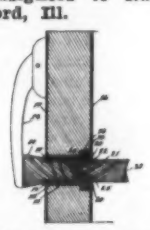
PATENTS

(Continued from preceding page)

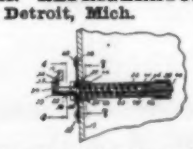
across when conditioning fluid is passed therethrough; first and second electric fans, each fan being positioned adjacent its corresponding coil to pass air thereacross when the fan is energized; means including an electric pump for forcing said fluid through said coils only when the pump is energized; first and second electric power supply means respectively including first and second electric devices having first and second mutually exclusive electric states for simultaneously energizing the pump and the corresponding fan only when the corresponding device is in its first state. . . .

2,784,022. SAFETY RELEASE FOR REFRIGERATORS. Edwin W. North, Rockford, and Robert K. Unter, Roscoe, Ill., assignors to National Lock Co., Rockford, Ill.



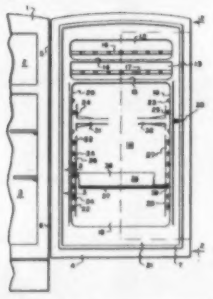
1. A safety device for preventing a child from being entrapped and suffocated in a refrigerator having a door provided with a latch and a latch handle for releasing the latch, comprising a tubular member in the door adjacent the latch handle and providing an opening therethrough, a sealing plunger of light transmitting material slidably mounted in the tubular member, the outer end of said plunger projecting to the exterior of the door and abutting the latch handle but exposed to the light at the exterior of the door for transmitting this light to the interior and the inner end of said plunger projecting beyond the interior of the door into the interior of the refrigerator where it may be viewed and engaged and forced outwardly by the entrapped child.

2,784,023. LOCK RELEASING DEVICE IN REFRIGERATORS. Joseph Pisani, Detroit, Mich.



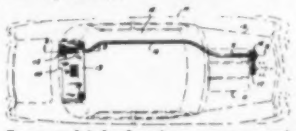
1. A keeper mechanism adapted to be engaged by a latch carried by a hinged door to releasably latch the hinged door in closed position, said keeper mechanism comprising a tubular member mounted in a stationary position and having a front end and a rear end, a cylindrical collar at the front end of the tubular member, the front face of the collar being provided with a radial slot means, a shaft slidingly disposed within the collar and including a front portion extending forwardly out of the collar, a spring coiled about the rear portion of the shaft and serving to impart to the shaft a rotary movement about its axis, the front portion of the shaft terminating with a radial spur defined on the side facing the wall with a flat face, radial pin means projecting from the shaft and normally in engagement with the slot means in the collar, the spur being spaced from said pin means to leave a space for the latch bar. . . .

2,784,044. REFRIGERATOR DOOR CONSTRUCTION. Victor J. Kurowski, Louisville, Ky., assignor to General Electric Co.



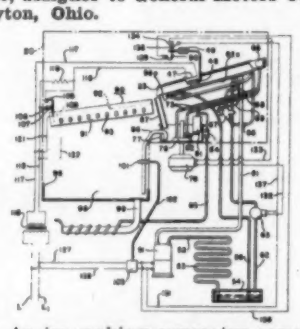
1. In a shelving arrangement for use with refrigerator door of the type having an outer shell and an inner liner including side and rear walls defining a recess, and including at least one storage shelf having an upstanding front guard, that improvement comprising supporting means formed integrally with said door and said shelf and adapted to releasably mount said shelf at a plurality of vertically spaced positions within said recess, said means including a row of vertically spaced bosses formed integrally on each side wall of said recess adjacent the front thereof, with said bosses of one row being horizontally aligned with said bosses of the other row, a plurality of rows of vertically spaced depressions formed in said door within said recess with the depressions of each of said rows being horizontally aligned with the depressions of the other row, said depressions being positioned rearwardly of said bosses and opening outwardly toward the front of said recess. . . .

2,784,562. DRIVE FOR VEHICLE AIR CONDITIONING APPARATUS. Reynold F. Gamundi, Mayfield Heights, Ohio, assignor to Eaton Mfg. Co., Cleveland, Ohio.



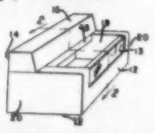
1. In a vehicle having a compartment to be air conditioned and a driving motor provided with an auxiliary power take-off, an air conditioning unit mounted on said vehicle at a point relatively remote from said motor and operable to supply conditioned air to said compartment, a flexible drive shaft having its power output end connected with said unit and its power input end adjacent said motor, clutch means actuatable to establish a drive connection between said power take-off and the power input end of said flexible shaft at any one of a plurality of drive ratios, and speed-responsive electric switch means for controlling the operation of said clutch means and the drive ratio from said power take-off to said air conditioning unit.

2,784,563. ICE MAKING APPARATUS. Marshall W. Baker, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio.



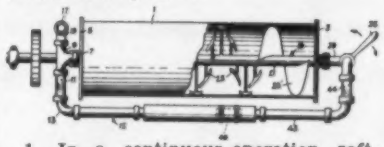
1. An ice making apparatus comprising, a cabinet, a plate within said cabinet, means for flowing water over said plate, means for refrigerating said plate to freeze water flowing thereover into a slab of ice thereon, means for heating said plate, said plate heating means being normally ineffective during refrigeration of said plate and while water is flowing thereover, thermostatic means responsive to a predetermined thickness of the slab of ice formed on the plate to simultaneously stop the flow of water over said plate, to render said refrigerating means ineffective and to render said heating means effective for breaking the bond between the slab of ice and the plate whereby the slab of ice slides off said plate, means within said cabinet for receiving the slab of ice slid off said plate . . . .

2,784,564. DISPLAY CASE FOR FROZEN FOOD. James A. Canter, Dayton, Ohio, assignor to General Motors Corp., Detroit.



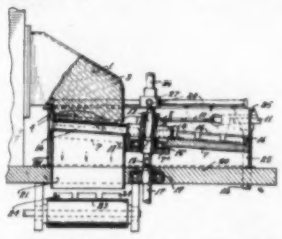
1. In a refrigerated display case, an elongated substantially open top cabinet provided with a compartment having an air passage therebelow, a return air flue at one side thereof with its inlet near the top of said compartment and a feeder flue at the side of said compartment opposite said return flue with its outlet also near the top of the compartment, means for circulating air downwardly in said return flue through the inlet thereof, across said passage, upwardly in said feeder flue and out of the outlet thereof, in a stream over the top of said compartment in exposed relationship to air at the ouen top of said cabinet, and means for cooling the circulating air, the improvement which comprises the provision of a turbulence chamber along the length of said compartment in front of and above the inlet of said return flue, said chamber being open at its bottom to receive and momentarily trap air which escapes from said stream thereof upon approaching the inlet of said return flue whereby said trapped air swirls in said chamber, and the swirling trapped air . . . .

2,784,565. CONTINUOUS-FLOW ATTACHMENT FOR SOFT-CREAM FREEZERS AND METHOD EMPLOYING THE SAME. Otis M. Stalkup, Redondo Beach, Calif.



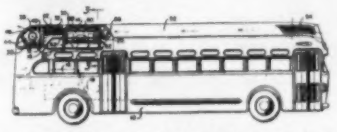
1. In a continuous-operation soft-cream freezer having an inlet and an outlet end, agitator means for churning the mix and forcing it toward said outlet end, and a dispensing conduit including a multiple-position manual valve connected to said outlet end, the improvement comprising a recirculation conduit connecting the outlet end of said freezer to the inlet end thereof so as to continuously or intermittently return the colder or more crystallized cream from the outlet end to the inlet end of the freezer to improve the homogeneity of the product; and heating means in said recirculation conduit in good heat exchange relation thereto whereby ice crystals in the cream will be melted to improve smoothness and fluidity of the product.

2,784,567. RAPID REFRIGERATION OF FOODSTUFFS. Julian L. Reynolds, Richmond, Va.



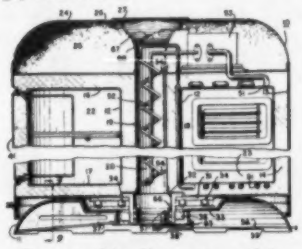
1. A method of freezing plastic ice cream and the like which consists in depositing successive units thereof upon an area of a table of high heat conduction, first subjecting the table and the units to a spray of low-temperature non-toxic refrigerant, draining said refrigerant into an area of said table apart from the deposition area, maintaining a pool of said drained refrigerant, moving the units from the point of deposit on the table to a point of discharge and through said pool, and discharging said units from the table.

2,784,568. VEHICLE REFRIGERATING APPARATUS. Hans O. Schjolin, Birmingham, Mich., assignor to General Motors Corp.



1. A vehicle provided with a roof and side walls and a passenger compartment beneath the roof within the side walls, a compartment beneath the roof provided by a ceiling above a portion of the passenger compartment spaced beneath the roof and an upright partition wall extending between the ceiling and the roof, upright refrigerant evaporating means extending generally parallel to and spaced from each side wall of the vehicle with the evaporating means spaced apart to form an inlet space, the ceiling beneath the inlet space being provided with a recirculating air inlet, a distributing discharge duct means extending along each side of the passenger compartment, and fan means located between each of the evaporating means and the adjacent side walls . . . .

2,784,569. ROTATABLE REFRIGERATOR WITH MULTIPLE COMPARTMENTS. John Houghton, Byron, Ohio, and Hubert A. Edney, London, Ont., Can., assignors to General Motors Corp., Detroit.



1. In combination, a refrigerator cabinet, a base for supporting said cabinet, means mounting said cabinet on said base for rotary movement relative thereto, said cabinet having inner and outer walls with insulating material therebetween forming a plurality of individual food storage chambers therein, each food chamber having an access opening, separate doors normally closing the access opening of said individual food storage chambers, said insulated walls providing a partition in said cabinet between said food storage chambers, said insulated walls also being shaped to form a vertical flue in said partition extending through said cabinet at the axis of rotation thereof upon said base, said flue having an inlet at the bottom of said cabinet and an outlet at the top thereof for the circulation of air therethrough, a refrigerating system carried by and rotatable with said cabinet relative to its supporting base, said refrigerating system including a refrigerant evaporator for cooling the interior of one of said food storage chambers to a temperature below freezing, a refrigerant translating device having a condenser and conduits connecting said evaporator. . . .

2,784,570. HOT-GAS RECIPROCATING ENGINE FOR REFRIGERATING. Jacob Willem Laurens Kohler, Eindhoven, Netherlands, assignor to Hartford National Bank & Trust Co., Hartford, Conn.

1. A hot-gas reciprocating apparatus comprising a cylinder, a piston in said cylinder and forming therewith at least two spaces a variable volume in which a gas of constant chemical composition performs a closed thermodynamic cycle, means for communicating between said two spaces comprising a freezer provided with channels therein, a regenerator and a cooler, a part of said regenerator and said

Government Contracts

ARMY

Purchasing and Contracting Office, Camp Drum, Watertown, N. Y.
REHABILITATION OF REFRIGERATION PLANT Bldg T-60 Camp Drum, N. Y. Provisions and Dwgs avail. Bid Sets avail thru 3 Jun 57—Job—IFB 30-356-57-63—Bid Opening 5 Jun 57.

Purchasing and Contracting Officer, Ft. Stewart, Ga.
AIR CONDITIONING 2 BUILDINGS—Job—IFB 09-076-57-102—Bid Opening 6 Jun 57.

Post Purchasing & Contracting Office, Fort Leonard Wood, Mo.
AIR CONDITIONING REPLACEMENT, BLDGS. 70 (EENT) & 92 (Dental)—Job—IFB AV-23-037-57-64—Bid Opening 14 Jun 57.
AIR CONDITIONING BUILDINGS 83 (B-9) & 103 (A-12)—Job—IFB AV-23-037-57-67—Bid Opening 14 Jun 57.

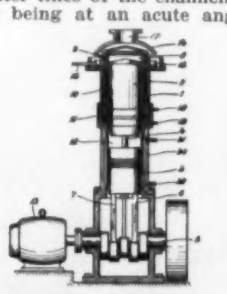
Lordstown Military Reservation, Warren, Ohio.
INSTALL HEATING SYSTEM AND CONSTRUCT GAS METER HOUSE at Building 108 Neville Island, Pittsburgh, Pa.—Job—IFB AII-33-058-57-69B—Bid Opening 10 Jun 57.

QM Purchasing Agency, Columbus General Depot, Columbus, Ohio.
DISPENSER, DRINKING WATER, mechanically cooled Fed Spec 00-C-566C—2 line items—IFB 57-676B—Bid Opening 5 Jun 57.

NAVY

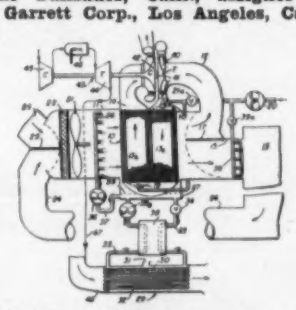
Officer in Charge, Navy Purchasing Office, 180 New Montgomery St., San Francisco, Calif.
FURNISH AND INSTALL ELECTRIC FURNACE, Heat Treating at Naval Air Station, Alameda per detailed specifications—Job—IFB 220-7665-P2-B—Bid Opening 17 Jun 57.

freezer being positioned to surround one of said spaces of variable volume, the center lines of the channels of said freezer being at an acute angle with



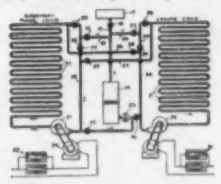
the center line of said one space of variable volume, and said channels being inclined in a direction toward said one space.

2,784,571. EVAPORATIVE AIR CYCLE COOLER. Helmut R. Schelp, Pacific Palisades, Calif., assignor to The Garrett Corp., Los Angeles, Calif.



1. An air conditioning system, comprising: air expansion means including an air inlet for working air and an air outlet to discharge said working air at a reduce pressure and temperature; a heat exchanger connected to said air outlet and providing a path for said working air after leaving said expansion means; nozzle means for introducing a spray of water into the working air after it has passed through said expansion means for evaporative cooling of said air during its flow through said heat exchanger; air moving means including an air inlet for the working air leaving said heat exchanger and an air discharge outlet; power means having a driving connection with said air moving means; duct means to conduct air to be conditioned through said heat exchanger along a path separate from the working air path but in heat exchange relation with respect thereto. . . .

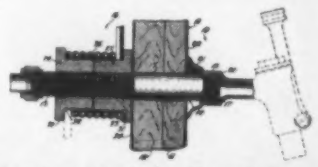
2,784,945. HEATING AND COOLING SYSTEM FOR A BUNGALOW. Nicholas Podor, Toronto, Ont., Can.



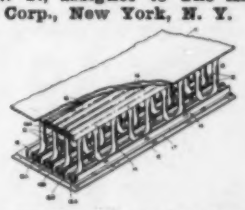
7. A heating and cooling system for a building having a ceiling structure and a floor structure bearing on the earth, comprising piping spread through the ceiling structure to utilize the ceiling surface for heating and cooling the building, piping similarly spread through the floor structure, heating means, means for connecting the piping in the ceiling structure in parallel with the piping in the floor structure and to the heating means for supplying warm fluid to the piping in cold weather to heat the ceiling and floor structures and thus to heat the building, means for rendering the heating means inoperative and connecting the piping in the ceiling structure in series with the piping in the floor structure in warm weather. . . .

2,784,946. REFRIGERATING APPARATUS. William Zydycryn, Newark, N. J., assignor of one-half to Anthony M. Tortorello, Newark, N. J.

1. In a refrigeration system a fluid discharge conduit having an elongated threaded section at one end to be passed through the insulated wall of a housing interiorly thereof for connection with the fluid supply source and having a second end for projection through the wall, said second end being threaded for short distance for connection with a discharge nozzle, a pair of members each comprising a cylindrical portion terminating at one end thereof in an outwardly directed flanged adapted to rest in contact with the insulated wall, said members being internally threaded throughout the lengths thereof. . . .



2,784,947. HEAT EXCHANGE ASSEMBLY. David G. Peterson, Wellsville, N. Y., assignor to The Air Preheater Corp., New York, N. Y.



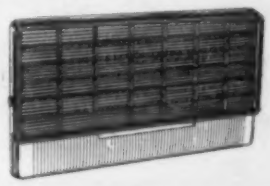
1. An envelope for a heat exchanger comprising metallic plates spaced apart to form walls for a fluid passageway; a plurality of heat exchange elements mounted in spaced parallel relation in said passageway as metallic wires sinuously bent to provide a plurality of U-shaped loops with leg portions extending in an upright relation between the plates and intervening loop portions lying adjacent said passage walls; and means positioning each sinuous wire relative to adjacent sinuous wires, said means including channel members bridging adjacent loops of each sinuous wire together with metallic spacers positioned uniformly at one side thereof to extend transversely a distance substantially equal to the width of one of said channel members.

2,785,075. QUICK FREEZING OF FOODS. George J. Malecki, Wellesley Hills, Mass.

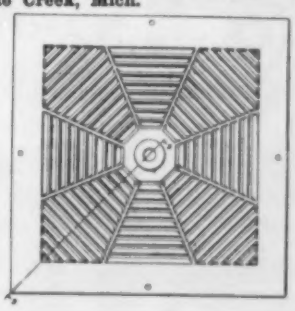
3. The method of cooling food products comprising applying an aqueous dispersion of a hydrophilic polymer to the surface of the product, and then subjecting the product to a reduced pressure lower than the vapor pressure of ice, thereby to cause the extraction of heat sufficiently to freeze said product.

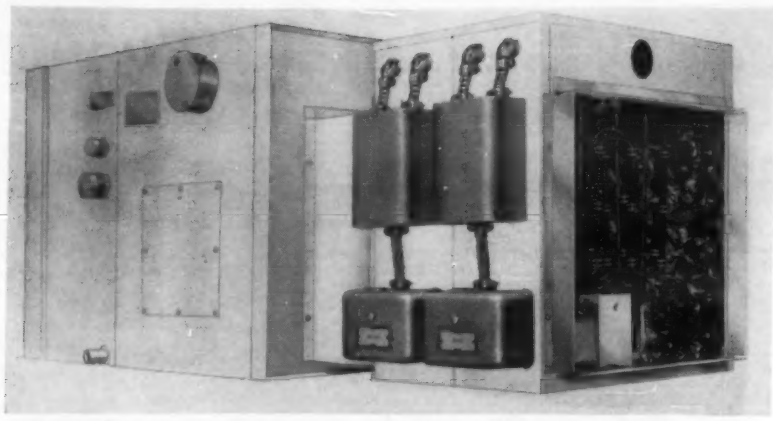
DESIGNS

179,839. COMBINED FRONT CONTROL PANEL AND GRILL FOR AN AIR CONDITIONER. Henry Dreyfuss, South Pasadena, Calif., assignor to Whirlpool-Seeger Corp., St. Joseph, Mich.



179,847. AIR DIFFUSER REGISTER. Clarence O. Griner, Ceresco, Mich., assignor to United States Register Co., Battle Creek, Mich.





NEW Shipley "Magi-Temp" heat pump circulates cool air in summer, warm air in winter. Two auxiliary heater sections are shown at right center.

Offers 2-Section Heat Pump--

(Concluded from Page 1, Col. 2)

to carry the entire heating load.

The inside section of the Magi-Temp includes motor-driven centrifugal blower, glass-fiber filter, heater section, and evaporator coil, which becomes a condenser during the reverse-flow operation. These are all housed in one cabinet, to which ducts for air circulation are connected.

The second section, installed outside, contains the hermetically-sealed compressor, centrifugal blower, motor, and condenser coil, which acts as an evaporator when heat is being supplied indoors. These are all housed in a weather-protected steel case, together with service valves, sight-feed glass, liquid receiver, reversing components.

"Pre-charged refrigerant lines eliminate the need to evacuate and charge with refrigerant in the field," it was noted. "Quick connect-disconnect fittings simplify installation and connection."

The company reported that "In all three sizes, a 30-amp heating coil adds 22,700 B.t.u., a 60-amp heater 45,400 B.t.u. These may be used in multiple combinations to supply the auxiliary heating capacity desired for certain installations.

"Model ACR7-20RD has a 2-hp. compressor, a cooling capacity of 24,000 B.t.u.h. and heating capacity as a straight heat pump ranging from 22,500 B.t.u.h. at outside temperature of 60° F. down to 12,500 B.t.u.h. at 20° F. Cabinet housing blower-evaporator-filter section is 27 by 25½ in. by 16⅛ in. high. Compressor-condenser case is 25½ by 35 in. by 22⅛ in.

"Model ACR7-30RD has a 3-hp. compressor, a cooling capacity of 33,000 B.t.u.h., and a heating capacity as a straight heat pump ranging from 33,000 B.t.u.h. at 60° F. down to 18,000 B.t.u.h. at 20° F. Cabinet of blower-evaporator-filter section is 28 by 25½ in. by 20¼ in. high. Compressor-condenser case is 30 by 42 in. by 24¼ in.

"Model ACR7-50RD, 5-hp. compressor, has a cooling capacity of 62,000 B.t.u.h., and a heating capacity of from 60,000 B.t.u.h. at 60° F. down to 33,000 B.t.u.h. at 20° F. outside temperature. Cabinet of blower-evaporator-filter section is 51 by 27½ in. by 26 in. high. Compressor-condenser case is 41 by 40 in. by 41 in. high."

'Inadvisable' To Regulate Credit--

(Concluded from Page 1, Col. 5)

The board assured Congress that it would follow closely developments in the use of consumer instalment credit.

Out of a thorough study of the subject that continued for more than a year, the board found that "because of economic and social factors likely to affect the future of instalment credit, its growth in the years ahead may be at a slower pace than in the past.

"The volatility of consumer instalment credit in the past was to some extent related to its rapid growth. If future growth is slower, the potential instability of this factor may be contained within tolerable margins."

The board also found that "under peacetime conditions, special regulation of consumer instalment credit would inevitably present problems of compliance to the financing and business concerns subject to it, and of administration and enforcement to the agency of government responsible for the regulation.

"Since early 1956," the board said, "expansion in total instalment credit has moderated, in part as a result of general monetary restraints and in part as a result of reduced demand for automobiles and other consumer durable goods commonly financed by instalment credit."

The board's study further revealed that past variations in the rate of granting consumer instalment credit coincided with general fluctuations in economic activity. These fluctuations, it said, "have been generally within the limits that could be tolerated in a rapidly growing and dynamic economy.

'Service Engineers' Week'

(Concluded from Page 1, Col. 3)

board of directors' meeting at Kansas City. International officers are lining up information for next year's observance.

International Secretary H. T. McDermott gives credit to Joe Sever of Los Angeles for originating the idea, and for contacting governors of the states to find if they favored it.

Clarence I. Marksberry of Arcadia, Calif., president of the RSES regional association with chapters in Arizona, California, Nevada, and Utah, says association directors are working to interest the industry generally in the Sever plan.

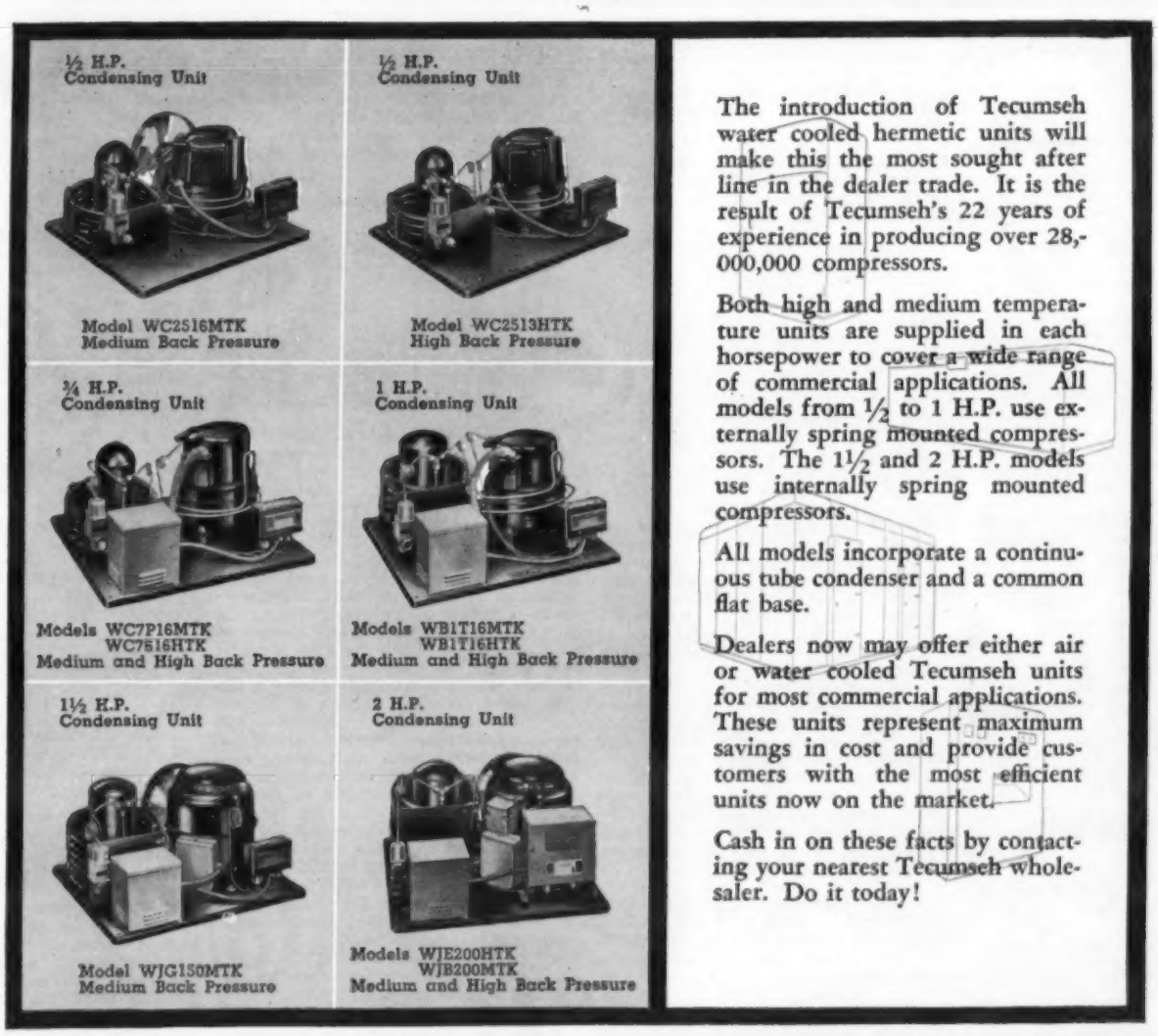
Proclamations were issued by the governors of Alabama, Arkansas, California, Delaware, Georgia, Kansas, Kentucky, Maryland, Michigan, Nebraska, Nevada, and Oklahoma.

Nineteen others indicated favorable reaction.

NOW for the first time....

Tecumseh WATER COOLED HERMETIC CONDENSING UNITS

10 Models - ½ - ¾ - 1 - 1½ - 2 H.P.


½ H.P. Condensing Unit
Model WC2516MTK Medium Back Pressure
½ H.P. Condensing Unit
Model WC2513HTK High Back Pressure
¾ H.P. Condensing Unit
Models WC7P16MTK WC7516HTK Medium and High Back Pressure
1 H.P. Condensing Unit
Models WB1T16MTK WB1T16HTK Medium and High Back Pressure
1½ H.P. Condensing Unit
Model WJG150MTK Medium Back Pressure
2 H.P. Condensing Unit
Models WJE200HTK WJB200MTK Medium and High Back Pressure

The introduction of Tecumseh water cooled hermetic units will make this the most sought after line in the dealer trade. It is the result of Tecumseh's 22 years of experience in producing over 28,000,000 compressors.

Both high and medium temperature units are supplied in each horsepower to cover a wide range of commercial applications. All models from ½ to 1 H.P. use externally spring mounted compressors. The 1½ and 2 H.P. models use internally spring mounted compressors.

All models incorporate a continuous tube condenser and a common flat base.

Dealers now may offer either air or water cooled Tecumseh units for most commercial applications. These units represent maximum savings in cost and provide customers with the most efficient units now on the market.

Cash in on these facts by contacting your nearest Tecumseh wholesaler. Do it today!

● ECONOMY ● DEPENDABILITY ● FREEDOM FROM SERVICE

OVER 29,000,000 COMPRESSORS IN USE TODAY

The World's Largest Producer of Compressors for the Refrigeration Industry

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